THE MARINE RECORD.

DEVOTED TO COMMERCE, ENGINEERING AND SCIENCE.

VOL. IX No. 30. CLEVELAND. O., JULY 28, 1887. $2.00 PER ANNUM SINGLE COPIES 5 CENTS

AROUND THE LAKES.

CLEVELAND.

Captain Ira H. Owen arrived here yesterday to go along with his new steel steamer, which will depart on her maiden trip to-day or to-morrow for the upper lakes.

The Globe Iron Works Co. this week started their new hydraulic riveter and flanger. Both tools work to perfection and will add materially to their facilities for speedy shipbuilding.

Mr. J. F. Pankhurst, general manager of the Globe Iron Works Co., will, with his wife, go to the upper lakes on the Ira H. Owen on her maiden trip this week. Mr. Pankhurst has been working hard during the past few months, making specifications, etc., for quite a number of new steamboats, and he will get a well earned rest.

The wreckers on the propeller Selah Chamberlain, sunk off Sheboygan, Wis., have made their last pull. Extra preparations were made for their last attempt at raising the boat, but the massive chains which were put around her broke again and she went down. M. A. Bradley has ordered the expedition home and the sunken boat will be abandoned.

The Cleveland Shipbuilding Co. has made a ten-years' lease with the city for the ground under one of the arches of the viaduct, adjoining their new moulding shop, whereon a large pattern shop will be erected. An addition of a five story building on their own property will carry the office of the company up on the viaduct on the south side and overlooking the works of the company.

Mr. Murch and other officials of the Manitoba Co., were in the city this week. They closed a contract with the Globe Iron Works Co., for two steel steamships, to cost $220,000 each. These are two of the half dozen steamers noted in the RECORD last week to be built by the Manitoba Co., for the transportation of ore. It is our belief that contracts for two other steamers for this company will be left in this city. Details will be given later.

The exhibition of the Lyman Smith pneumatic elevator in the presence of representatives from Buffalo and Chicago elevators, was as usual, a success. It is needless to say that the Cyclone did all that it was represented to do. The superintendents of the elevators, being practical men, were capable of judging of its usefulness, and agree that the pneumatic principle will be the system of grain elevating and transfer of the future. It was expected that Mr. Potter, of New York city, would be present, but he was obliged to stop off at Rochester to attend the canal convention which meets there to-day.

The tug Patrick Henry was damaged to the extent of about $250 by fire a little after midnight Tuesday night. She was lying at the dock below the Lake Shore bridge, and there was no thought of fire in the boat until it broke out through the doors and windows of the pilot house. The fire originated in the boat's hold, forward, and the damage is principally below. As there is no hatch forward in this boat the firemen found trouble in getting at the fire. The Patrick Henry is owned by Patrick Smith. She is worth about $8,000. It is probable that none of the fire insurance companies had a risk on her.

Robert Wallace, vice president of the Cleveland Shipbuilding Co., was a victim of a very painful accident on Monday. While overseeing some work being done around the pit for casting cylinders in their new moulding shop, a board slipped its hold on the edge of the pit and precipitated him to the bottom, a distance of about fourteen feet, his side striking on a shoulder near the bottom, but alighting on his feet in the extension. The violence with which the plank turned with him threw off both of his shoes, and when he struck the bottom of the pit a blunt piece of wood penetrated one of his feet. He pulled out the stick and after being brought to the surface he walked to the office where doctors, who had been sent for, attended to his injuries. He was taken to his home insensible, but is mending rapidly.

We learn that Engineer William Kennedy of the propeller Chicago is at home, 46 Woodbine street, sick with malaria.

The insurance companies have offered the schooner Republic, now at Cleveland, for sale at $3,000. An offer of $2,500 has been made. Her ore cargo has been taken out. It is the intention to sell her without making any repairs on her.

Ida M., daughter of Mrs. Anna Lloyd, died on Tuesday morning at 3 o'clock. Miss Lloyd was taken down with consumption last winter shortly after her father, Captain George Lloyd, lost his life on the schooner Lucerne on Lake Superior, and although endowed with great energy and courage, she never left her bed until the great destroyer summoned her. Miss Lloyd was patient at all times and won the admiration and love of all who met her. The funeral will take place on Sunday the 31st at 1:30 p. m., from No. 6 Waverly court.

The contract for a steamboat and consort for James Ash and others of Buffalo, was closed with Quayle's Sons this week, and work will be commenced at once. The steamer will be 260 feet keel, 275 feet over all, 40 feet beam, and 22 feet hold. She will have steel arches inside and out, and also be diagonally strapped. Boiler and engines will be built at Buffalo. Her consort will be 230 feet keel, 248 feet over all, 38 feet beam, and 17 feet depth of hold. She is to have a square stern, and will be steel arched and strapped. Both vessels are to be ready for sea on the opening of navigation next year. It is very probable that the steamer will go onto the blocks at Messrs. Quayle's lower or old yard, and that the schooner will occupy the place which will soon be made vacant by the launch of Captain Thos. Wilson's next boat at the upper yard, opposite the Cleveland Rolling Mill Co.'s upper furnace.

At Root's yard, near the water works L. P. & J. A. Smith's new steamer Joseph P. Farnam was launched on Tuesday. She is the first end launch that has taken place at this port for more than a score of years, and this only on account of the difficulty of getting available sites for shipbuilding, most all of the water front property being in use by kindred industries. The new steamer will be used by Messrs. Smith in their contract on the Cleveland breakwater. A consort for the new steamer, building at Root's yard, will follow into the water in a short time. It is the purpose of Messrs. Smith to put steam into the consort as soon as occasion demands. This end launch was not as clear and free as side launches at this port have become, as the boat stuck after moving a short distance and the service of tugs was required to pull her into the water. The new steamer is 161 feet over all, 151 feet keel, 33½ feet beam, 9½ feet depth of hold. She has steel arches, and is otherwise strongly constructed. The machinery and boiler were built in Philadelphia. Her engine is steeple compound, the cylinders being 12 and 12½ by 16 inch stroke and the Scotch boiler 8 by 9 feet, allowed 150 pounds of steam. Her cost is about $40,000.

There was a good demand for tonnage yesterday by shippers of both coal and ore. The former appeared to be ready to take all the vessels they could get at unchanged rates. Ore shippers asked and obtained some concessions from former rates. Agents offered vessels for loads from Escanaba at $1.45, but before they were chartered by owners for grain at Chicago. Engagements were made for ore from Ashland at $2.40, and the rate from Marquette was said to be $1.75 to $1.85. Vessels placed were steamer J. H. Prentice and schooner A. A. Carpenter, coal, Ashtabula to Portage, $1.00; schooner Goshawk, of same tow, stone, Kelley's Island to Portage, $1.00; steamer Kittie M. Forbes, hard coal, Erie to Duluth, 80c; schooner Mabel Wilson, coal, Cleveland to Duluth, 85c; schooner Atmosphere, coal, Cleveland to Mackinaw, 65c; schooner Hattie Wells, coal, Cleveland to Escanaba, 65c; schooner John Jewett, coal, Cleveland to Detroit, 40c; steambarge Handy Boy, wheat, Sandusky to Buffalo, 3c. Schooner Michigan, reported a few days ago for coal from Fairport to Milwaukee at 90c., takes coal from Cleveland to Chicago instead at $1.05.

CHICAGO.

Special to the Marine Record.

A large number of lower lake craft have arrived at Chicago this week with lumber. Sunday the tug Chief Justice Field brought along the barges Lilly May, Knight Templar, Bissell and Colorado, and on Tuesday the steambarge Ogemaw brought along the barges E. C. Roberts, City of the Straits, and A. C. Maxwell from Au Sable, and the steambarge De Leuty the barges Montgomery, R. Botsford, and E. K. Jackson, from Ashland.

Captain A. E. Burgess, of the steambarge Daisy Day, arrived in Chicago Tuesday. He reports that when four miles southwest of Little Point Sauble at 3:30 p. m., on the 24th, the crank shaft of the Daisy Day broke and she became disabled. The tug Cockle came to her assistance and towed her into Little Point Sauble. Robert Tarrant, marine engineer, Chicago, will do the necessary repairs on her.

The schooner Winnie Wing, Captain Peter Peterson, arrived Sunday with lumber from Manistee. She called at Pentwater on her way and picked up a raft of twenty-six large spars, consigned by Nickerson & Collister to Miller Bros. On Friday night about 11 p. m., when about twenty miles off Grosse Point, the chain rove through, the spars parted and the spars drifted away in all directions. The Winnie Wing was brought to an anchor, and on Saturday, with the assistance of the tug Protection, ten of the spars were recovered, and they were towed into port with the schooner. The remainder went ashore, off Highland Park, and will be towed to this port.

The Chicago Packing Meat Co., represented by Captain N. L. Sherwood, have gone into a new enterprise to increase their trade among vessel owners. They are running the steam launch Sea Bird around the river, picking up orders and deliverin g supplies.

The scow Four Brothers, in tow of a V. O. T. tug, coming down the north branch of the river Monday afternoon, collided with a mud scow, employed at Clybourn Place with a dredge, and had a hole knocked in her port bow, which necessitated her going into one of Miller Bros.' drydocks for repairs.

At Miller Bros.' drydocks the propeller City of Traverse was in for a new wheel; the steambarge S. H. Johnson is in getting her machinery placed on board; the scow Four Brothers for a piece of plank in her port bow; the schooner Snowdrop for a new stern, some new frames aft and new stern post; the schooner Truman Moss to have a leak stopped; the tug Wisconsin to have stern bearing fixed; the barge Anglo Saxon to have a leak stopped; the propeller Gordon Campbell was in for a new wheel; the tug Flossie Thielcke for repairs to stern bearing; the barge Mary E. Perene for calking bottom; the schooner Thos. Hume received a new foremast; the tug Brockaway a piece of new stern; the schooner City of Sheboygan is at the derrick having her masts taken out and will go into drydock for necessary repairs.

Grain freights dropped again Tuesday. The demand was light and the offerings comparatively large. Corn is scarce and orders for wheat are not extensive enough to furnish cargoes for the tonnage trading to Chicago. If carriers expect to hold grain freights up to a paying basis they must retire more tonnage from this market until a better shipping demand develops. Charters were made Tuesday at 3c on wheat and 2¾c on corn to Buffalo, a decline of ¼c. There were no loads offered for Georgian Bay.

At the Chicago drydock the barge R. J. Barney was in and had her bottom calked; the barge T. J. Bronson had a leak stopped; the schooner Windsor received some new plank in her bottom; the propeller Ballentine was in for repairs to syphon; schooner American had her bottom calked; schooners Emeline and Harriet Ross received new jibbooms; propellers Cuba and City of Duluth and schooners Geo. A. Marsh and Ebenezer have received necessary repairs. We are pleased to note that Mr. James Bates has recovered from his sickness and is able to be around again looking after his duties as foreman of the dock.

Robert L. Henry & Co., Chicago, purchased the schooner Westchester on Monday; consideration $2,000 cash.

The schooner Snowdrop was purchased by John Tholen, of Chicago, at sheriff's sale on the 21st of July for $1,450.

Mrs. C. W. Elphicke, wife of the well known vessel agent, died suddenly at her home at Riverside on the 20th, of heart disease. This is the second severe affliction that Captain Elphicke has suffered within a few months, for it was only a short time ago that his bright little boy was called away.

Commander Clarke, of the newly created lighthouse district, is getting the government steamer Dahlia in shape for an extended trip of inspection of his district. Colonel Walter S. Franklin, member of the lighthouse board, will arrive here Tuesday to make the inspection. The main purpose of the trip is to make Mr. Franklin acquainted with some of the dangerous rookeries that serve as lighthouses in this district. Some of these, particularly the one at Skillegalee, are rapidly becoming untenable.

The new Coatsworth elevator started Monday. Her first cargo was wheat out of the schooner Planet from Sandusky.

Franklin D. Locke, attorney for the Lackawanna road, said that road intends to put on a new line of steamers next spring. Captain M. M. Drake, acting under instructions from the company, has been looking through the various shipyards on the lakes to find if the boats can be built. Final action will be taken when he reports, and it is likely he will be made general manager and superintendent of construction.

WILLIAMS.

SAND BEACH.

Special to the Marine Record.

Last Friday a summer storm arose and drove the following barges and vessels in for shelter: Schooners Mary, Alzora, J. F. Card, L. L. Lamb, Reindeer, propellers Leland, Bessemer and consort, Guiding Star, tugs M. F. Merrick, Geo. B. Dickson, C. E. Pendell and International. The tug Sweepstakes, with a raft in tow, lost her raft above Port Hope. The life saving crew and the tug Dickson have gone to pull the raft off and get it in shape to go on to Detroit, where it is owned. LUFF.

AMHERSTBURG.

The barge George Worthington, of Detroit, was sunk Saturday night by a collision with the schooner George W. Davis, of Huron, off Colchester Reef, Lake Erie. The Worthington was light, and the Davis was loaded with iron ore. The crew of the Worthington took to their boats and got aboard the Davis and were all saved. The Davis was brought here by the tug Wilcox with her stem sprung and her jibboom gone. One pump kept her free. She will be towed to Fairport. The George Worthington was built at Euclid by Treat in 1852, measured 220 tons, owned by Whittaker of Detroit and was valued at $3,000.

[Continued on 5th page.]

MARITIME LAW.

CHARTER PARTY — DISPUTED CLAUSE—AUTHORITY OF BROKER TO SIGN—FAILURE OF PRINCIPAL TO RATIFY—CROSS SUITS ON DISPUTED CLAUSE—DISMISSAL.

U. S. District Court, Southern District, of New York.

Charterers required the insertion in the charter party of a clause to the effect that the vessel would put in oil tanks. The broker for the owners, in signing the charter containing this clause, exceeded his authority, which fact was known at the time to the broker of the charterers. The owners consistently thereafter refused to confirm the disputed elause, while the charterers never receded from their position requiring its insertion. Nevertheless the vessel was tended to the charterers, and received, and made one voyage under the charter. Thereafter a question arose as to the disputed clause; both parties renewed their original position, and the owners, after putting oil tanks in the vessel brought this suit to recover the expenses from the charterers, while the latter brought a cross suit to recover their damages because the tanks were not fitted up earlier.

Held, that under the circumstances the written contract never became a binding contract as a whole, and that neither side could found a claim against the other upon the disputed clause, and thereafter both libel and cross libel should be dismissed.

Brown, J. This written charter party signed by the brother of the libelants did not constitute a legal contract binding upon either of the parties, because in signing it the broker exceeded his authority and that fact was communicated at the time to the broker of the respondents. It was agreed between the brokers of each party, however, that if the clause relating to the extension of time to twelve months and the clause requiring the ship to fit up the oil tanks at her expense were objected to by the owners, the matter should be settled by negotiation.

The respondents from the first refused the charter unless the ship should fit up the tanks at her expense, and that fact was stated to the libelants broker at the time, and the owners of the ship in England subsequently refused to confirm the two clauses in the charter as proposed by the brokers. Notice of this refusal was given to the charterers, and they never consented to waive these two clauses. The agreement of the brokers was that upon such a difference the matter should be settled by negotiation. But it never was settled. Neither side apparently wished to push the matter to a settlement, though each understood the difference. No agreement as to these two clauses was even arrived at; while both deemed them material. The subsequent conditions of each shows that neither side receded, or intended to recede from its position. When the vessel arrived, ready for the first voyage, neither party made inquiry as to the disputed clauses. The duty of inquiry rested upon each alike, if they wished to have a fixed agreement. Both in fact assented to the use of the ship on the first voyage without any definite agreement on the disputed points, and without the settlement by negotiation that had been agreed on by the brokers. The charterers did not object because they were not ready to use tanks. When the respondents were ready to use the tanks, and required the vessel to fit them up in pursuance of the terms of the charter, the libelants refused to do so.

The cargo was then taken in barrels, under a stipulation that that might be done without prejudice to the rights of either; the respondents claiming damages for extra expenses. Subsequently the owners fitted up the tanks, claiming that the expenses would be at the charge of the charterers, while the latter notified the owners that they would not pay for any such expense.

As the written charter never became a binding contract as a whole, for the total want of authority in the broker of the ship owners to insert the two very material stipulations in question, and as the charterers never agreed to accept the charter, except with those stipulations, and gave prompt notice thereof, and did nothing to mislead the owners, the charter party, as such never became a contract binding upon either. It may be referred to, however, as fixing the rights of each in so far as it must be presumed to have been actually adopted by both parties in their subsequent acts, and no further. The owners failure to notify the charterers directly for several weeks after the charter had been signed that they refused their assent to the two disputed clauses, was irregular and perhaps somewhat negligent on their part, but I do not think that material in the result, because the charterers were, I think, apprized of the verbal refusal of the owners to those terms. Nevertheless, the vessel came to the charterers without further request by them, and was tendered to them by her owners, without, attempting any settlement of the disputed points. Both alike consented to the first voyage without any settlement of these differences. It is certain, however, that as soon as any question was made between the master and the charterers abou the tanks after the first voyage, the original refusal of the owners was made known to the respondents, and neither of the parties ever agreed to the demands of the other on this subject, Without either side yielding anything to the other as to the charter, the ship was employed, and neither side refused further dealings as they might have done.

Under that state of things, the terms of the charter must be deemed to constitute the implied agreement of the parties in the actual use made of the ship in all except as to the disputed clauses. Neither party can found any claim against the other upon the clauses that the other party did not expect, but always and consistently refused to accept; because in the face of such a refusal no agreement to them can be implied. The owners, therefore, can recover nothing for their expenditures in fitting up the tanks to carry oil in bulk; nor can the charterers, by their cross libel, recover any damages for the tanks not being fitted up earlier. For the same reason also, the owners cannot recover for any lien of the vessel while they were fitting up the tanks. They lose nothing by this disallowance, because it does not appear that any more time was required to fit up the tanks when the work was actually done, than would have been required when the vessel was brought over to the charterers. The evidence shows that after the employment of the vessel had begun, neither side was desirous of insisting on its legal right to discontinue all further service by reason of the failure of the parties to come to an agreemeent upon the disputed clauses of the written charter. The rights and liabilities of the parties are founded, as I have said, not at all upon the written charter party but wholly upon their subsequent conduct in the actual use of the ship. The charter party is applied by implication to these acts so far as it presumptively indicates the intention of both, and no further. There can be no implied promise or obligation in contradiction of the expressed refusal of either. The result is, that neither has any claim upon the other for the damages set forth by them respectively; and the libel, and the cross libel, must therefore each be dismissed, except as respects the lien unpaid, if any, for the time of the actual use of the vessel by the charterers.

June 14, 1887.

THERMAL UNIT AND THE DANGERS OF VACUUM.

JAIL, TEASPOON CORNERS, N. Y.,
July17, 1887.

Sepcial Correspondence to the Marine Record:

The tremendous sale of my last article on scientific engineering prompts me to give the hungering public the second installment, and I trust the study may be no less earnest than was given my initial attempt. Having previously given the simpler features in engineering, I now purpose to devote this to the lighter branches of labor.

Young engineers are frequently confronted by "thermal units," and terms of a like nature, and I purpose to define such terms, and show where they are found. A thermal unit is a word of foreign origin and is from a Greek word "*ther*," meaning hot, and "*mal*," meaning to blast, hence thermal means "blasted hot." But, as applied to pneumatics, a thermal unit is the united force of creative action, contracted in proportion to the square of the magnitude. Hence, in all solid bodies, whether of organic or inorganic nature, there is a transversed degree of thermal secretion which is always in proportion to the siderial cosmical influence of falling bodies upon the atmospheric changes. In steam boiler practice a thermal unit is the standard of measurement whereby the evaporative efficiency of a boiler is determined.

Rule for determining the thermal units exerted in an evaporative test of steam boiler practice.

First, get your boiler ready, say a horizontal boiler 60"by16" with ordinary standard setting; place fire under it. Take a graduated scale of 60,000 tensile strength, and secure for the test, rain water that falls in harvest time, as the influence of ripening vegetation has a tendency to precipitate the component sulphates and cause a direct lassitude of the germs of explosion.

Formula: For every avordupois exerted in square inches upon the fulcrum of the safety valve add three times the pressure of the specific gravity; from this deduct the latent heat of the water incidental to the pressure, will give you the thermal units in a pound of water of standard commercial value.

The writer would advise all engineers to study this question thoroughly before attempting a professional test.

A hyperbolical curve is the curve of radiating force produced by the inverted degree of transmission as described in all piscatorial theories, where the pirouett of a pirogue equals twice the distance from the center to the verge. In indicator practice the hyperbolic curve occurs at intervals transversely proportional to the length of the stroke of high pressure engines. Should the hyperbolic curve be square in the left-hand corner, take the valve of the feed pump out and turn it square around, or, in extra cases, transpose the two cylinders into a relative ratio of the synchronal syncopate. However, this should never be resorted to so long as the interregnum remains undisturbed, or the intaglio intact. To form this curve, it is best to close up the windows of the engine room to allay metric differences. Then lay out your diagram with an ordinary sledge hammer; be sure to measure the square of all distances, which should never transcend the result of retrospective observation. A line drawn fore and aft will give the exact curve.

Compression is twin brother to radiation, and never occurs when the piston is stationary, but is very likely to occur where the valves are removed from a direct hypothenuse which will never happen in ordinary practice, if the hypocarpogean lines are drawn squarely with the tonnage of the ship. While different writers advocate different methods of treatment for this disorder, it is now pretty generally conceded that the only safe plan is to remove the cylinder heads and let the compression escape.

Of all the subjects treated by theorist the ordinary heel and toe vacuum is the most discouraging and most cordially hated. Even Nature, that is generally so lavish in her favors, it is said, abhors a vacuum. The writer is unable to say what caused Nature to get down on a vacuum; in fact, Nature refuses to say, but it is generally believed that a vacuum beat Nature out of a job once. I am sorry to see so many of our engineers take kindly to a vacuum; for they are liable at any time to fall in and die from its effects. I am glad to see the vacuum gauge becoming so generally used and we may by this means reduce the effects of this evil. A full-grown vacuum weighs about 15 pounds and measures nearly 30 inches, yet I have seen vacuums as small as 26 inches, go strutting around like a full-grown one, while the engineer in charge would expatiate upon it with all the enthusiasm of youth. Reform it, gentlemen, reform it, altogether.

For further particulars regarding a vacuum, call at my office, where I have a good sample in a bottle, taken from a celebrated Cunard steamer, three minutes before she sunk, carrying with her every inch of vacuum as well as every body else to the bottom of the sea.

THE SECOND ENGINEER.

TO PREVENT FIRE AT SEA.

The burning of the Champlain and the loss of twenty-two of her passengers and crew ought to teach steamboat owners a lesson. It should set them to thinking, and the most important thought that suggests itself is how to prevent the occurrence of another such shocking disaster. Steamboats do not catch fire and burn to the water's edge without cause. There was a cause for the destruction of the Champlain, and the coroner's jury that listened to the testimony of the survivors said it was carelessness. Who was careless or in what manner the jury does not pretend to explain. Like all investigations when a great many lives are lost in a disaster at sea, this one seems to have been loosely conducted and without any apparent effort having been made to fix the responsibility where it belongs. The jury simply paved the way for getting at the facts and then quit. Had it followed up the testimony of one of the firemen the exact truth might have been got at. He stated that an oil lamp, slung to the ceiling, did the mischief. The lamp was used to light a narrow passage way that connected the engine room with the forward freight compartment of the steamer. Whoever lit the lamp did not fasten it securely, and the bottom fell out. A half pint of oil was spilled over the woodwork, which immediately ignited, and almost within an instant the entire after end of the steamer was in flames. The engineer, hearing the crackling of the burning timbers, opened the door leading into the passage and the flames leaped through, setting fire to his clothing. By the time he could run to the hurricane deck, plunge into a tank of water and return to his post, the flames were beyond control, and had obtained such complete possession of the engine room that he was powerless to stop the engine or to even check the speed of the steamer. Owing to this fact the lifeboats could not be launched, and both passengers and crew—men, women, and children—were compelled to plunge into the lake to escape being burned to death.

Even if it were true it would probably do no good to prove that the lamp was of a cheap pattern that should never have been used, or that the oil that fed the wick was below standard grade. Neither could any good result from showing that the porter, or whoever attended to the lamp, was careless in attaching the bottom. The fact is that there should have been no lamp there to set fire to the steamer. Nor should there be any portable or fixed lamps used in any part of a passenger boat. In this age of improvement, when oil lamps have been superseded on land by gas, and gas by electricity, lamps on steamboats, and particularly those that are engaged in carrying passengers, are no longer a necessity. It has been practically demonstrated that electric light can be substituted for oil lamps in illuminating steamboats, and the cost is so small that the change should not only be immediately urged but compelled. Conditions on steam vessels are so favorable to combustion that the adoption of an absolutely safe process of illuminating cabins, decks, machinery, and cargo spaces is much to be desired. Passenger steamers are the very worst kind of firetraps, and only extreme caution on the part of owners and officers has prevented frequent disasters like that of the Champlain. Every part of a steamboat furnishes inflammable fuel to feed a fire. The seams of the hull and of the decks are calked with oakum and paid off with pitch, oil, or paint. The upper works are of light pine material, and the walls of the cabin, from frequent painting, are so veneered with white lead that they burn like so much tinder. The roofs of the cabins are covered with canvas, thoroughly saturated with paint and oil, to make it impervious to moisture. Oil, dripping from the machinery, is constantly soaking into the woodwork of the engine room and firehold, and the extreme heat from the boilers renders it all the more inflammable. Go into the lamp room, many of which are not lined with metal, and it will be found that the woodwork there is thoroughly soaked with oil. Consequently, steamboat owners owe it to their patrons to take every precaution possible against fire.

The cost of fitting up an average passenger steamer with electric lights need not exceed $4,000, while the cost of maintaining the lights is nominal. The first steamer on the lakes to substitute electricity for oil lamps is the City of Cleveland. In every compartment and in every state room there are incandescent electric lights, so that at night every part of the steamer, including the hold, can be made as light as at high noon. The entire cost of the outfit was $8,000, but one-half of this amount was extravagantly expended in elaborate electroliers for the magnificently appointed cabin. The motive power that generates the electricity is furnished by steam from the main boilers, but even if extra steam were required it could be had by the consumption of only one ton of coal per day. On the City of Cleveland an extra engineer is employed to run the dynamo apparatus, although that expense could be dispensed with on any of the regular line steamers where the duties of the engineers are less arduous.

Aside from proving an important safeguard against fire at sea steamboat owners would find electric lights a valuable aid in facilitating the loading and unloading of freight. Fully one-half of the landings made by passenger steamers occur at night and with only the dim light supplied by lanterns much valuable time is lost in handling cargo. With an electric lighting apparatus aboard the hold, the decks, and even the docks could be brilliantly illuminated and the cargo could then be handled as rapidly as in the day. Recently the Anchor line supplied its docks and warehouses in Chicago with an electric light plant at a cost of about $4,000. Nineteen lamps light the vast warehouses as bright as the sun does, and whenever a steamer reaches the dock additional lamps, connected by insulated wires, are placed on deck and carried into the hold. The experiment has proven that 140 tons of freight can now be unloaded in an hour, while with oil lanterns but 90 tons were trucked out in the same length of time. Another great advantage is that the light is so bright that dock laborers are afforded no opportunity for stealing packages from the cargo. In former years the losses by theft in a single season amounted to much more than the entire cost of apparatus.—*Exchange.*

LAKE SHORE & MICHIGAN SOUTHERN

Commencing Monday, May 16, 1887. The time given in the figures below is the new standard (Ninetieth meridian) time, which is thirty-three minutes slower than Cleveland time proper.

Eastward.	Arrive	Depart.
No 4, Fast Limited Express	*2 55 A M	*2 55 A M
No 8, N. Y. B & A Express	*8 30 A M	*8 55 A M
No 26, Elyria Accommodation	†7 45 A M	
No 24, Buffalo Ac'm via Sandusky	†10 30 A M	†10 45 A M
No 24, Toledo Accom via Norwalk	†10 30 A M	†10 45 A M
No. 10, New York & Boston, "Flyer"		*11 35 A M
No 12, N Y & B Fast Express	*2 20 P M	2* 45 P M
No 2, Night Ex via Norwalk	9 40 P M	†10 00 P M
No 22, Night Ex via Sandusky	†9 40 P M	
No 26, Conneaut Accommodation	†4 25 P M	

Westward.	Arrive.	Depart.
No 1, Fast Limited Express	*12 15 A M	*12 15 A M
No. 23, Cleveland Express	*2 15 A M	
No 3, Chicago Express via "	§5 20 A M	5 35 A M
No 25, Mich Accom Norwalk		†5 35 A M
No 21, Toledo Ex via Norwalk	†12 50 P M	†3 20 P M
No 5, St Louis Ex via Sandusky	*10 50 A M	*10 55 A M
No 9, Chi Pac Ex via Norwalk	*6 15 P M	*6 40 P M
No 31, Elyria ac to Elyria only		†4 30 P M
No 27, Conneaut Accommodation	†8 10 A M	

Sunday train for Nottingham—Depart 8:15 a. m. and 1:45 p. m.; returning, leave Nottingham at 8:50 a. m. and 3:45 p. m.

Reference marks—* Daily, † daily, except Sunday, § daily, except Monday.

A local Cleveland and New York sleeper, also sleeper for Boston, and dining car daily on No. 10, leaving Cleveland at 11 35 A M.; arrive Grand Central depot, New York, 7.30 a. m.

For full information as to trains and counections apply at the Union ticket office, corner Bank and Superior streets, under Mercantile Bank.

M. E. GAUL, City Passenger Agent.
A. J. SMITH, Gen'l Pass. Agt., Lake Shore Block

VESSELS SUPPLY STORE.

SPIEGLE BROS.

MARINE SUPPLY STORE

WHOLESALE AND RETAIL

Grocers, Bakers and Ship Supplies;

Fresh & Salt Meat of all Kind.

30 & 32 River-st., opposite Detroit Steamboat Landing, and 184 Broadway. Telephone 112,

CLEVELAND, OHIO.

SHIP AHOY!

WHEN YOU ARRIVE AT SARNIA BE SURE TO CALL AT

CAPT. A. E. McGREGOR'S, FRONT ST.,

FOR GROCERIES AND PROVISIONS;

ALSO, AT

W. A. BUCHNER'S, OPP. CITY HALL

for Fresh and Cured Meats, Ice, etc. Prompt delivery. Open day and night.

A. E. McGREGOR, Grocer. W. A. BUCHNER, Butcher.

McKINNON BROS.

Ashtabula Harbor, O.,

Machinists, Shipsmiths & Steamfitters;

ALSO, DEALERS IN

Engineers' Supplies, Lubricating and Burning Oils.

BUSINESS PROMPTLY ATTENDED TO.

AN IRON MINE FOR SALE.

This mine is on the shores of Lake Huron, close to a good harbor. First-class ore, assayed 70 per cent pure iron. This ore is said by experts to be much better than Lake Superior iron ore. and the only ore of its kind so far discovered on this continent capable of making Bessemer steel. Will sell outright, on shares or a royalty. Specimens of ore furnished and inspection of mine solicited.

Also, two silver mines on Lake Superior, close to a good harbor. Specimens furnished. Apply to MARINE RECORD, Cleveland, Ohio.

HARBOR TUG MOLLIE SPENCER.

ENGINE, 20 by 24, Port Huron, Mich. For light wrecking this tug has the most complete outfit on the lakes. Supplied with steam ejectors, capacity of 32,000 gallons per minute, hawsers, steam pumps, diving rigs, blocks etc., just the outfit for waterlogged and sunken boats, at cheap rates. River and harbor towing. Telephone, telegraph.

LYNN'S TUG OFFICE.

TUG FOR SALE.

Length over all, 52 feet; beam, 13 feet; depth of hold, 5 feet 8 inches; net tonnage, 7.38. Engine, 10x12; upright steel boiler. One year old, and in first-class order. Address,

JAS. LAIRD, Ashtabula Harbor, O.

H. D. COFFINBERRY, PRES'T. ROBERT WALLACE, VICE PRES'T. WM. M. FITCH SEC'Y.

THE CLEVELAND SHIP-BUILDING COMPANY,

Detroit and Center Streets, Cleveland, Ohio,

IRON SHIPS,

Marine and Stationary ENGINES AND BOILERS,

Blowing Engines and Steam Hammers,

AND MILL GEARING AND CASTINGS.

We take pleasure in announcing that we have purchased the property, business and good-will of the Cuyahoga Steam Furnace Company, and will add to these works, so long and favorably known, a first-class Iron Ship-building Department, with sufficient room and all modern facilities for building two large vessels at the same time, and a Boiler Shop with most approved tools for large work, including Tweddell's Hydraulic Plant for flanging, riveting, etc.

We have associated with us Messrs. H. D. Coffinberry and Robert Wallace, late of the Globe Ship-building Co., and the Globe Iron Works, and Wm. M. Fitch, late of the Winslow Line of Steamers. We have made the following appointments: Mr. O. N. Steele, Assistant Superintendent; Mr. Thomas W. Bristow, late foreman of Wyandotte Ship Yard, Superintendent of Ship Yard; Mr. Quincy Miller, Superintendent of Boiler Shop; Mr. John Stoney, Superintendent of Foundry, and Mr. Jas. C. Wallace, Draughtsman.

We purpose building Iron and Steel Vessels of all descriptions, Marine and Stationary Engines and Boilers, Blowing Engines, Steam Helve Hammers and such other work as our large assortment of patterns eminently qualify us to build, at a minimum price.

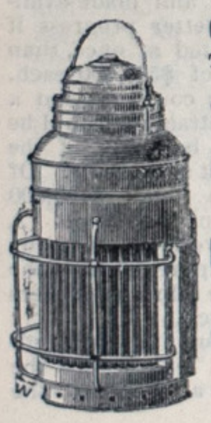
Your patronage is solicited, and we trust that the excellence of our work, with fair dealing and strict attention to business, will secure its continuance.

THE CLEVELAND SHIP-BUILDING COMPANY.

SIGNAL LAMPS

For Steamers and Sailing Vessels.

PATENT FLUTED LENS AND PERFECT COLORS.



GET THE BEST AND AVOID COLLISIONS.

These Lamps give a more brillant light than any Signal Lamp now in use.

They have been adopted by the principal Ocean and Lake Steamers

Over Ten Thousand Now in Use.

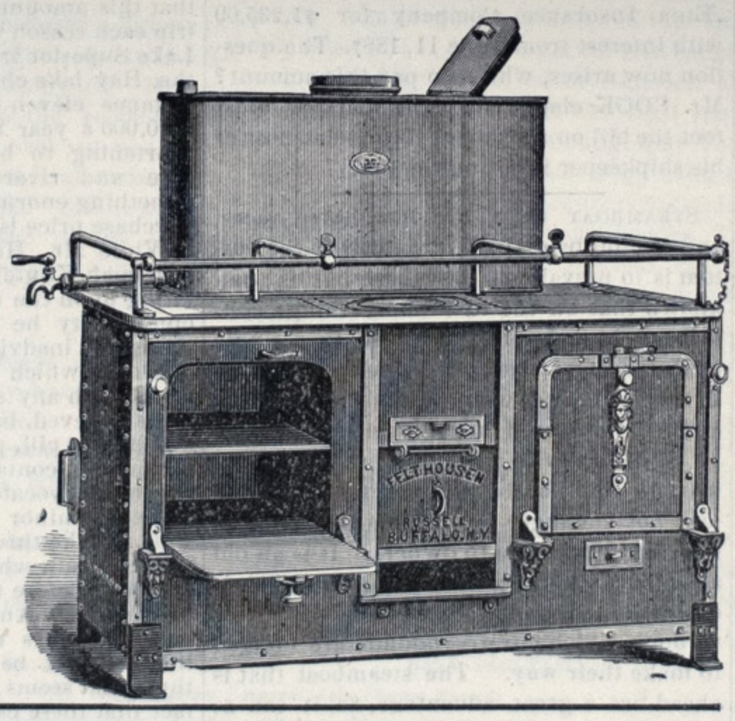
WE ALSO MANUFACTURE THE CELEBRATED

French Wrought Iron Ranges and Broilers of all Sizes for Steamers and Hotels.

Steamboat Copper, Tin, and Sheet Iron Workers.

FELTHOUSEN & RUSSELL,

139 & 141 MAIN ST., BUFFALO, N. Y.



Cleveland Dry Dock Co,

Shipbuilding, Drydocking, Repairing and Spar Making.

CLEVELAND, OHIO.

MARINE REPORTER AT THE STRAITS.

Reports of Passing Vessels a Specialty.

Messages Delivered to Passing Vessels Day or Night, Weather Permitting.

MY ICE REPORTS MAY BE RELIED ON.

SEVENTEEN YEARS EXPERIENCE

The Patronage of the Marine Public Respectfully Requested--Charges Reasonable.

F. J. STIMPSON, MACKINAW CITY MICH.

Established in 1859.

HENRY LEOPOLD.

Manufacturer and Dealer in all kinds of fine and plain

FURNITURE & UPHOLSTERY,

And Manufacturer of Counters, Shelving, Bank and Bar-room Fixtures.

Mattrasses and Vessel Furniture

A SPECIALTY.

Warerooms 798 and 800 Lorain-st., near Fulton. Factory 10 Willet-st.

CLEVELAND, OHIO.

Scott's New Coast Pilot

Corrected for Additions and Changes to the Opening of Navigation in 1887,)

IS SOLD BY

SHIP CHANDLERS

AND BY THE PUBLISHER,

GEORGE SCOTT,

AT 162 LARNED E., ST., DETROIT, MICH

Moiles Tug Line.

Sault Ste. Marie, Mich.

Office on WATER ST., 5th door from Canal Park.

Tugs Tom Dowling, Frank Tracy and Laura Gibbs.

All kinds of Tug Work Done with Promptness and Dispatch. Tugs and Lighters Always in Readiness.

RAFT TOWING A SPECIALTY.

Correspondence Solicited.

WM. H. RADCLIFFE,

Shipbuilder and General Repairing.

OLD RIVER BED, Ft. OF TAYLOR St.,

CLEVELAND, O.

WARD AND JACKSON,

SHIPSMITHS,

All Kind of Forgings, Bolts and Truss Rods for Building.

49 Main-st Cleveland

WINDLASS FOR SALE.

The undersigned have a Hadfield Patent windlass or a one and three-eighths inch bar chain for sale cheap.

JOHNSON & BATES,
127 Erie St., Racine, Wis

DETROIT BOAT WORKS.

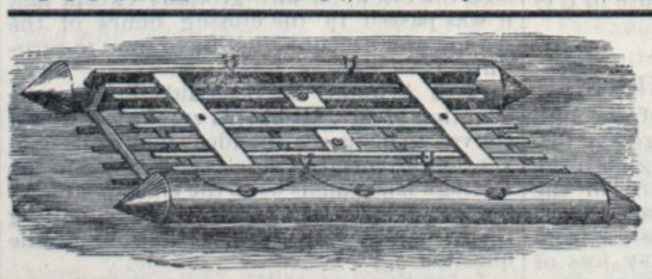
BUILDERS OF

STEAM AND SAIL YACHTS, RACING SHELLS AND HUNTING CANOES

SOLE MANUFACTURERS OF

Clark's Patent Metallic Life Rafts and Wooden Life Boats.

YAWL AND ROW BOATS of all sizes in stock. Steam and Hand Steering Wheels made to order. SHOPS, FOOT DEQUINDRE ST., DETROIT, MICH. TELEPHONE No. 1154.



THOS. DREIN & SON

BUILDERS OF

METALLIC LIFE BOATS

and LIFE RAFTS of all classes Government and Pleasure Boats of Wood. Block Cork Life Preservers. Sole manufacturer of Capt. JONATHAN CONE'S celebrated

Patent Life Rafts

Tattnall-st and Railroad, Wilmington Del.

CAPT. GEO. A. SIMPSON,

Compass Adjuster,

COMPASSES, BAROMETERS, PATENT LOGS AND MARINE GLASSES REPAIRED,

Schooners can have their Compasses Adjusted for Local Attraction at the time of repairs by stating how much they are out on East or West Courses, and which way it leads, North or South of above Courses

161 River St., Cleveland, O.

ROBERT E. HILLS,

57 & 59 North Wells St., Chicago, Ill.
Telephone 3321.

STEAM FITTING AND HEATING,

Wrought Iron Pipe & Fittings

ENGINEER'S SUPPLIES.

General Jobbing Work Done Promptly.

Also, Proprietor of North Side Brass Works.

Marine Record.

Published Every Thursday at 144 Superior Street, [Leader Building] Cleveland, O.

A. A. POMEROY, EDITOR AND PROP'.

BRANCH OFFICE:
252 South Water Street, Chicago, Illinois,
THOMAS WILLIAMS, Associate Editor.

TERMS OF SUBSCRIPTION:

One year, postage paid.....$2.00
Six months, postage paid..... 1.00
Invariably in advance.

THE MARINE RECORD can be found for sale by the following news dealers:

CLEVELAND, O.—G. F. Bowman, corner of Pearl and Detroit Streets.

Evans & Van Epps, Superior street, Cleveland.

R. A. Castner, 254 Detroit street, Cleveland.

W A. Ford, corner of Bridge and Pearl streets.

ASHTABULA HARBOR, O.—C. Large.

CHICAGO, ILL.—Joseph Gray, 9 West Randolph Street.

CHICAGO, ILL.—H. B. Hansen, 33 West Randolph Street.

BUFFALO, N. Y.—Miss McCabe, Elk Street, near Ohio.

Charles McCready & Co., No. 14 E Seneca St

Mrs. Mary Jannigan, on Michigan St. Swing Bridge.

DETROIT, MICH.—N. F. Stewart, Ft. of Woodward Av.

STAR ISLAND, ST. CLAIR FLATS, MICH.—McNiff & Son.

DULUTH, MINN.—C. F. Johnson, 323 West Superior Street.

MARQUETTE, MICH.—J. A. Vannier.

ESCANABA, MICH.—Wm. Godley.

ESCANABA, MICH.—George Preston.

SARNIA, ONT.—D. McMasters.

OWEN SOUND, ONT.—J. Sharpe, Jr.

KINGSTON, ONT.—F. Nisbet, corner Brook and Wellington Streets.

Subscribers and others are respectfully invited to use the columns of the MARINE RECORD for the discussion of pertinent topics.

Entered at the Post Office at Cleveland as second-class mail matter.

CLEVELAND, O., THURSDAY, JULY 28.

THE SAULT CONVENTION.

The improvement of the St. Mary's canal, as Senator Palmer said at the convention last week, means cheap wheat, cheap copper, and cheap iron to the people of the east, and cheap manufactured goods to the people of the west.

There can be no doubt that the enlargement of the St. Mary's canal is the most important work to the commerce of the entire country that the war department will have to do for many years to come. This is the view taken by the convention which assembled at the Sault on the 20th inst. The convention was called through the Duluth chamber of commerce, and was largely attended by leading business men from several states. A memorial to congress, read by Senator Ely, set forth in a business-like way the necessity of enlarging the St. Mary's canal in order that the rapidly growing commerce of the northwest may have quick passage to the lower lakes; that detention to the Lake Superior fleets will not occur, and that the exigencies of the situation demand that appropriations for the improvement be at once made in order that the work may be pushed as rapidly as possible.

The wisdom of the convention in declining to ride the memorial for the enlargement of the Sault canal with the Portage lake and canal resolution is commendable. While we favor the purchase of that work by the government, we do not think it would, at this time, add any strength to the St. Mary's canal movement, and might, possibly, antagonize it. The Portage purchase is already in good shape before congress, and we have no doubt but it will pass at the next session. It has been too much the custom heretofore, at waterways conventions, for the representatives to take up too many schemes at one time, and in motions for appropriating money for various enterprises to lose sight of the principal object, thereby directing the attention of the country to the fact that as it is so easy to ask for many things perhaps one is not needed more than another, thus jeopardizing the most important requirements.

The convention was unanimous in its view of the importance of building an enlarged canal, and many statistics were cited by General O. M. Poe, showing that the facilities of the present canal will be inadequate to accommodate the traffic before many years, or by the time a new canal can be completed, even if work is begun at once and pushed with vigor. We, therefore, urge upon congress to give the memorial adopted at the convention due consideration and provide an enlarged canal for this great highway of commerce.

WE have in a former number of the MARINE RECORD taken occasion to point out the causes that combine to make the position of firemen on board a steamship a most unenviable one, and that they should receive compensation accordingly for their services. Every little while we get word of firemen being crazed by the heat of the furnace as it is confined in the small space in which the stroker has to operate. In these cases of over-exertion and great heat the fireman literally has his brains burned out and rushes on deck and jumps overboard or is confined in a berth until the heat he has taken into his lungs burns his life out. This is one of the evils on board steamboats that should be looked after, and, if possible, mitigated. It appears that JOHN BURKE, one of the firemen on the steamer Waverly, died last week from this cause. BURKE was taken violently sick shortly after the steamer left Port Colborne. He went into the boiler room to clean the fires, but before he completed his task dropped the poker and ran up on deck, shouting that he was sick. The chief engineer noticed the condition of the man, and attempted to pacify him. He partially succeeded, but BURKE'S ravings suddenly burst forth again, and the crew had considerable trouble in preventing him from jumping overboard. They finally succeeded in binding him hand and foot. BURKE was then placed in his bunk, where he raved until death relieved him of his sufferings. The intense heat in the boiler room is supposed to have affected his mind.

IN September, 1886, the Ætna Insurance Company of Hartford, Conn., by Mr. JOSIAH COOK, its proctor, seized the tug Harvey Neelon on a charge of carelessness and negligence in towing the schooner Glenifer on the reef at the head of Niagara river in broad daylight. A libel in this case was filed by the company to recover from the Neelon the amount the company paid to the owners of the Glenifer on their policy. After the seizure of the Neelon by the deputy marshal, the person in charge as shipkeeper left the Neelon for some reason, and while so absent some Canadians ran her out of port and took her to Canada whence she has never returned. In the meantime legal proceedings have been progressing, and on the 19th of July at a term of the United States court at Albany, on motion of Mr. COOK, a final decree was granted in favor of the Ætna Insurance Company for $1,235.09 with interest from June 11, 1887. The question now arises, who is to pay this amount? Mr. COOK claims that the marshal must foot the bill on account of the carelessness of his shipkeeper in losing the tug.

STEAMBOAT races are like horse races, and should be divided into heats if the custom is to prevail on the lakes. It is well known that on the turf many things conspire to beat the fastest horse in a single trial, therefore, the rule of the best three in five was adopted, which gives the speediest and best bottomed horse a chance to win. It is just so with steamboat running, and masters can not be too careful that they may not endanger their boats and make a race very expensive to owners. It is an old adage that a stern chase is a long one. This is especially true on the lakes and narrow rivers through which our greyhounds are obliged to make their way. The steamboat that is ahead has a great advantage, as it can as completely box up its antagonist in the rear and endanger the boat as any field of horses can combine to beat a speedier one out of the purse on a race track.

AT the Sault convention last week Captain WILSON said: "One of our boats, loaded with 75,000 bushels of wheat, makes the trip from Duluth to Buffalo in four days. Freight cars cannot do that. There is no use in trying to make a comparison."

BATH'S BIG SHIPYARD BURNED.

The Bath (Me.) Independent of the 16th gives the details of the recent large and disastrous fire there in the New England, the largest wooden shipbuilding yard in the United States. The fire originated in an oakum shop, and was caused by ashes from a pipe. In addition to the heavy loss of buildings and material, there were three fine vessels destroyed, a 1,000-ton, four-masted schooner for Captain F. A. Anderson, of New York, all framed, ceiled, and partially planked; another vessel of the same kind for Captain Bailey, of New Jersey, half framed, and the other a fine tug called the Cocheco, owned in Dover, N. H. A 1,000 ton, four-masted schooner for Captain W. Carter, of Greenpoint, N. Y., was saved. The offices of the New England Shipbuilding Co., and a private residence, the property of the company, were destroyed. The big mill and joiner shop, were, however, saved.

THE SAULT CONVENTION.

The convention met in a large tent, used as an opera house by an enterprising manager, catering to the amusement of an embryo city. The seats were all filled and an array of congressmen, ex-congressmen, and other important officials, including ex-Governor Josiah W. Begole, filled the stage.

The temporary president, Wm. F. Phelps, of Duluth, called the convention to order, and in a brief and pertinent speech set forth the objects of the convention.

Bruce Goodfellow, of Detroit, performed the duties of temporary secretary.

The committee on permanent organization, after an animated session, in which the merits of the several gentlemen proposed were warmly advocated by their friends, selected, on motion of Congressman Farquhar, of New York, Senator T. W. Palmer, for president; W. F. Phelps, Duluth, secretary; Bruce Goodfellow, Detroit, assistant secretary; and numerous vice presidents.

Senator Palmer, on assuming the duties of the chair, made a pleasant little speech, in which he referred to the importance of the work, the great lakes being the highways of the empire, and the commerce dependent upon the canals and straits, the rivers and harbors being of the greatest value to the whole people.

A recess was taken until afternoon.

On reassembling George H. Ely, of Cleveland, on behalf of the committee on resolutions, read a long and well prepared memorial to congress, putting in the best shape the facts and figures, the history, growth and increase of lake commerce. The document evinced a great amount of study and profound knowledge of this subject. He also read, as recommended by the committee, but separately from the memorial, a resolution offered by Mr. Hubbell, asking congress to purchase and improve the Portage lake and Portage river canals.

Congressman Knute Nelson, of Minnesota, moved the adoption of the memorial, but not of the resoluiion, recommending the purchase by the general government of the Portage lake canal and the Portage river improvements.

Jay Hubbell moved as an amendment the adoption of the resolution favoring the purchase of the canals. He supported the motion with a speech, in which he showed that a committee of engineers, headed by General Abbott, acting under orders of the war department, had recommended such a course, for the reason that it afforded a harbor of refuge much needed upon Lake Superior, as it shortened the distance around Keweenaw Point twelve miles. Mr. Hubbell argued that this amounted to an additional round trip each season for vessels engaged in the Lake Superior trade. If the deepening of the Hay lake channel, and shortening the distance eleven miles, made a difference of $500,000 a year to the freight interests, the shortening to be effected by the Portage lake and river improvement would be something enormous, considering that the purchase price is only $350,000,

While Mr. Hubbell was speaking Congressman Knute Nelson seemed to be cogitating upon the question, and at the first opportunity he rose to antagonize it. He thought it inadvisable to lumber up the main question, which was the enlargement of the canal, with any side issues. The president, as he believed, had refused to sign the river and harbor bill, passed by the last congress, because it contained several measures like the one advocated by Mr. Hubbell, which were of minor importance. It would be well to take this matter into consideration and ascertain what the attitude of the president was before forcing obnoxious measures upon him. Another thing of importance was the votes of southern members, and they will not be induced to vote for anything that seems like private measures. The fact that these canals were private property, held within a single state, and not essential to inter-state commerce, would produce the opposition of southern members. He did not think it safe to jeopardize the main question by such action.

Congressman Moffatt, of Michigan, took up Congressman Nelson, pointing out that there was not the slightest objection in either house of congress to the purchase by the general government of the Portage lake canal, and that the president had not pocketed the bill upon any grounds except that it was passed in the closing hours of the session and he could not have time to scrutinize it.

Isaac Atwater, of St. Paul, thought the adoption of Mr. Hubbell's resolution would convey to congress the idea that this convention attached as much importance to the Portage lake canals as to the enlargement of the St. Mary's canal. He was not willing to do that, and moved a division of the question.

Judge Stevens, of Minnesota, said that he favored the purchase of the Portage lake canals, but did not wish to see the proposition to do so attached as a rider to the main question.

Mr. Hubbell withdrew his resolution as an amendment, and the memorial as read by Mr. Ely, was unanimously adopted.

Mr. Hubbell again offered his resolution. This time it was opposed by Congressman Farquhar, of Buffalo. He opposed any rider of any kind to the St. Mary's canal memorial.

Mr. Hubbell said that for the convention to be silent upon the Portage lake canal was a tacit admission that it was more of a private than a public matter.

Mr. Farquhar replied that the convention could put the Portage lake canal purchase in no better shape than it already stood before congress, with unanimous reports in its favor by committees of both houses. He would not handicap the $7,000,000, needed for the St. Mary's canal project, with any such resolution.

Mr. Hubbell defended his resolution as promotive of the highest interests of inter-state commerce. General Abbott had reported that 90 per cent of the commerce passing through it originated outside of Michigan.

The discussion became interesting. Both sides were tenacious. Hubbell's points were strong, and Farquhar felt called upon to reiterate the possibility of a veto, which he said, without any disposition to disparage the president, might come from ignorance, stupidity, or something else.

This remark did not suit Judge Chipman. He rose to reply, and was urged to take the stage, the better to be seen and heard. When on the stage he was presented by Senator Palmer as the congressman-elect from the first district of Michigan. Judge Chipman took advantage of this phrase by saying that to be congressman-elect implied a state of primal innocence—one unused to the ways that are dark and tricks that are vain, of those who have experience with matters of this kind (great laughter). However, he hoped that after he had had experience he might come out with records as good as those of the distinguished gentlemen who had spoken on this subject. This remark smoothed the feelings of Mr. Chipman's antagonist, and the convention applauded it. He said that everybody admitted that the enlargement of St. Mary's canal was the principal thing. Nor did Mr. Hubbell's resolution ask anything of this convention but an expression in favor of the Portage lake canal, which he thought ought to be given. He said he greatly admired the president, and had every respect for him personally and officially, but upon questions of this kind did not stop to consider what the president thought of it. He thought it a new thing for the American people in convention to refrain from taking action upon any subject until the president's feelings had been ascertained. This sentiment was greatly applauded.

Mr. Dean, of St. Paul, said it was desirable to improve the Portage lake canal, but he felt, and most of the convention felt, that the St. Mary's canal was the principal thing. He asked for a reading of the call, and it appearing that it spoke of the St. Mary's, he moved to table Mr. Hubbell's resolution, and the motion prevailed—yeas, 67; nays, 30.

General Poe, upon invitation of the convention, read from his reports, already published, the facts about the commerce of the canal. The figures he brought down to this date, showing an increase in vessel passages thus far over last year of 714; increase of tonnage, 483,000 tons. Eighty-four vessels had been passed through the canal in one day. The estimated maximum number was 96. One day last June 49 vessels passed through, carrying upward of 49,000 tons, over 1,000 tons to the vessel. The average daily tonnage this year is 26,786, which he compared with the 15,000 tons passing daily through the Suez canal, thought to be the most important on the globe. Altogether, he estimates an increase of 60,000,000 of tons over last year. The work to be done in enlarging the canal and deepening Hay lake channel might be done in five years if the money were appropriated and made available. He could make better progress if $1,000,000 were appropriated at once, than with two appropriations of $500,000 each. He did not mean that he could expend a million in a year, but contractors could be employed upon different branches of the work, greatly expediting it as a whole. Of the present appropriation about $125,000 was unexpended at the present time. A great many other facts were presented by General Poe, and so well appreciated by the convention that they gave him three cheers for his well delivered speech.

Senator Seymour, of Sault ste Marie, addressed the conventien at length upon the importance of the work, after which the convention adjourned.

NOTICE TO MARINERS.

Notice is given by the lighthouse board that on or about August 1 the light shown on the north side of St. Mary's Falls canal, about 450 feet from the outer end of the north pier at its western entrance, will be changed from fixed white to fixed red.

AHOY! MARINERS!

The beacon light, which guides you safely in the harbor of pecuniary advantage is the Boston Dry Goods firm of *Kohn & Co.*, 213 Detroit st., near corner Pearl st., Cleveland, O., established since 1866 in this city, informing you of our specialty in supplying vessels with ☞ *Comfortables, Blankets, Table linen, etc* and that we *sew to order* at *shortest notice* ☜ *Sheets, Pillow-cases*, or any necessary equipments for bedding.

☞ We are also pleased to inform you that we are the *only* manufacturers in this city who retail direct to consumers, none but *our own genuine home-made* ☞ *Flannel Shirts, Waterproof Shirts, Scarlet Flannel Undershirts* and *Drawers, Overalls, Jean Pants*, etc., or ☞ *make them to order* ☜ for the same price we sell them ready-made. ☞ All our Shirts are 52-inch wide, 36-inch long, extraordinarily well sewed. ☜ The *Custom Cutter*, associated with our merchant tailoring department offers to make *Gents' finest Cassimere, Broadcloth Suits*, in the *latest style*, guaranteeing the best fit and fine workmanship ☞ *for $8 less* ☜ than any other merchant tailor, because he has *no Rent to pay, does his own cutting*, and wants *to advertise himself*. Kohn & Co., 213 Detroit st., near corner Pearl, Cleveland, O.

LOSS OF THE THEODORE PERRY.

The terrible loss of the schooner Theodore Perry, on Lake Erie, with five lives, was the topic of this otherwise quiet Sunday. The propeller Alaska arrived here at 8 o'clock Sunday morning with Captain McCormack and Mate Hugh Deering on board, having rescued them from the wreckage of the Perry. She left Buffalo here late Thursday night in tow of the steamer D. W. Powers, which had in order the B. B. Buckhout, Senator Blood, Theodore Perry, and Wyandotte. The Perry and Senator Blood were coal laden from this port to Saginaw. About 9 o'clock Thursday, night, when some seventy miles above Long Point, they got a stiff wind from the north, which soon worked up a heavy sea that caused the Perry, as well as the other vessels, to labor in the trough. At 11 o'clock Captain McCormack, who had gone forward, noticed that she was opening up on the starboard side forward just under the deck beams. He sung out to his crew, who were all on deck but the cook, that the boat was leaving them and to save themselves. In less than three minutes from that time she was below the surface. When the vessel went down the captain sprang on the cabin and the mate on the forecastle deck, where they clung eleven hours before they were rescued. The two portions broke apart and drifted about near each other. The mate was partly submerged and nearly dead when found by the Alaska. The crew consisted of James Covert, of Buffalo; Ben Kennicutt, of Saginaw; Chas. Copely, of Saginaw, and the cook, a Mrs. Wiseminter, besides Deering and himself. Copely, who was nominally master, is a step-son of J. H. Prentice, of Saginaw, owner of the Perry. What became of him neither McCormack nor Deering could tell. Deering says that one man called to him when they were in the water; that he tried to reach to him, and when nearly to him the man disappeared. Whether he went down or got hold of some other portion of the wreckage is not known. A passenger, Neal McLain, of Saginaw, was also lost. As the yawl boat was found by the Alaska, it is certain that all five are drowned. The Powers passed Detroit with three barges so it is likely that the Wyandotte, which was after the Perry, was picked up again. The Perry was an old timer, having been built by Bidwell & Banta in Buffalo in 1855. She was given what was claimed a rebuild at Bay City in 1885-6.

The following is a description of those lost from barge Theodore Perry:

CHARLES J. COPELAND, aged twenty-three, light blue eyes, brown hair, light mustache, if any, height about five feet nine inches; feet are very high in the instep, so much so as to be nearly a deformity; was dressed in dark clothing (it any) of fine make; wore merino yachting shirt, brown color; son of the writer, and for the recovery of whose body a liberal reward will be paid by me.

NEIL MCLAIN, nephew of Captain A. C. McLain, owner and vessel agent, East Saginaw. Height about five feet six inches; clothing of fine material, a description of which cannot be had at present; eyes dark blue; brown hair, cut short; forehead high and broad; was a friend of Copeland, making a trip for pleasure. A liberal reward is also offered for above by A. C. McLain.

BEN NETHERCUTT, seaman, age about twenty-one; height six feet; color of eyes blue; complexion light, somewhat freckled; the ends of all the fingers on one hand had been cut off, and a large scar on wrist of same hand; color of hair very red.

One seamen and the female cook we have no description of.

If the bodies of any of the above are found, a telegram to either A. C. McLain, East Saginaw, or J. H. Prentice, owner, East Saginaw, will receive prompt attention.

J. H. PRENTICE.

Saginaw, Mich., July 25.

LAKE FREIGHTS.

Rates on ore are unsettled and a trifle weaker than at last report, tonnage, however, being still scarce and in demand. The rate from Escanaba and Marquette has declined 15c. Rates on grain are still weak, a decline being noted from Duluth of ½c. On coal, Cleveland to Chicago, an advance of 5c is scored, lumber remaining unchanged. We quote:

ORE.	
Escanaba to Chicago	95c
Escanaba to Ohio ports	1.45
Marquette to Ohio ports	1.85
Ashland to Ohio ports	2.25
Two Harbors to Ohio ports	2.50
GRAIN.	
Wheat, Duluth to Buffalo	5½c
Corn, Chicago to Buffa'o	2¾@3c
Wheat, Chicago to Buffalo	3@3¼c
Wheat, Milwaukee to Buffalo	3¾c
Wheat, Detroit to Buffalo	2⅞c
COAL.	
Buffalo to Milwaukee	1.00
Buffalo to Chicago	1.00
Buffalo to Duluth	75c
Cleveland to Milwaukee	1.00
Cleveland to Chicago	1.05
Cleveland to Duluth	85c
LUMBER.	
Bay City to Tonawanda	$2.25
Bay City to Ohio ports	2.00
Saginaw to Tonawanda	2.37½
Saginaw to Ohio ports	2.12½

[*Around the Lakes Continued from 1st Page.*

DETROIT.

The steambarge Bay City had her machinery repaired at S. F. Hodge & Company's iron works.

Merrick & Esseltyn have sold the schooner Montgomery to Captain Christie of Toledo for $7.500. This schooner was built by Johnson at Clayton in 1853 and had large repairs in 1883. She measures 284 tons.

The steamship R. P. Fitzgerald was successfully launched at Springwells Saturday afternoon. She is the property of Armour, Egan Fitzgerald & Company and is in all respects a duplicate of the John F. Eddy. Her principal dimensions are: Length of keel, 256 feet; beam, 38 feet 4 inches; depth of hold, 22 feet. The R. P. Fitzgerald will be ready for business about August 10 and will be commanded by Captain LaSalle who brought out the Wiley M. Eagan a short time since.

P. J. Ralph & Company's, new steamer Chenango, built by Oades, has been chartered at Detroit for wheat to Buffalo. She will carry about 50,000 bushels.

The steambarge William Rudolph, that was burned last fall on Lake St. Clair, will be ready to leave St. Clair this week, entirely rebuilt. It is said she will be one of the finest steambarges of her kind on the lakes.

The tug Gladiator recently arrived in Bay City, Mich., with a raft of logs from Lake Superior containing 4,800,000 feet.

Harrie R. Newberry's steam yacht Reta is at the Detroit drydock receiving a larger wheel.

The new steamship Fayette Brown left Marquette Saturday evening at 5 o'clock and passed Detroit at 2 p. m. Tuesday. She had about 1,050 tons of iron ore on board.

The Champion's raft, which passed down Sunday night, was somewhat shaken up by the blow. The tug Hercules went down to Lake Erie to assist in straightening it out.

The little steamer Massasauga got a bad squeeze between the Cole and Idaho. It seemed for a few moments as if the little boat would be flattened out, but she got away without receiving damage enough to delay her.

Every passenger steamer leaving Detroit is crowded with pleasure seekers. Manager Carter says the Detroit & Cleveland Steam Navigation Company's steamers would all be crowded even if they were all as large as the City of Cleveland.

BAY CITY.

Special to the Marine Record

Al Grisdale recently chartered a lighter to take a quantity of oak flitch from Hitchcock's mill to Wheeler's shipyard. He had just finished putting on the second load when the load shifted over to one side, breaking the scow in two and twisting it out of all manner of shape. About half of the deck load went to the bottom of the river, and it will cost him fifty dollars to fish it up, while the lighter is almost a total wreck.

The steamer on the stocks at Wheeler's shipyard in West Bay City, has been painted and will soon be launched. She is 5 feet longer than the W. H. Gratwick and F. W. Wheeler, the sister boats, launched at this yard in the spring.

Harry Shaw has purchased the lighter Lulu B., from Carkin, Stickney & Cram, which will be used in his rapidly increasing business.

Captain Angel, of the barge Kate Brainard, is a man of muscle. On Wednesday he threw an offensive dockwolloper over the rail of his boat onto the dock.

The barges Transport and Star of the North, late of the Michigan tow, are now on the river with coal. They will trade to the Valley for the remainder of the season.

SHAW.

KINGSTON.

The barge Dorchester being built by the M. T. Company, will be launched this week. She will have a carrying capacity of 30,000 bushels.

All gas buoys in Canadian waters will be lifted every autumn earlier than the ordinary wooden buoys, and will be replaced by wooden buoys till the end of the season. They will also be placed in position in the spring several days later than the wooden buoys, which they will then replace on their respective stations.

The new tug now being built by the M. T. Company will be called the James A. Walker, and will be launched this week. The craft is called after one of the first forwarders on the St. Lawrence river. Mr. Walker is now employed in the office of Hugh McLennan, Montreal.

Application for letters patent has been made by the Windsor Tug and Wrecking Company, with headquarters at Windsor, Ont., and a capital of $150,000.

BUFFALO.

The Union Steamboat Company, and Leopold & Austrian, owners of the B. W. Blanchard and Bessemer, respectively at the time the former rendered the latter a service on Lake Superior last fall, have adjusted the claim amicably. It will be remembered that the Bessemer broke her steering gear, and the Blanchard held her up until she could make repairs.

Captains Brown and McLeod, who surveyed the propeller Cumberland at Buffalo on Monday, report that she is all right. It will be remembered that on account of some alleged poor planks in her hull, and for other supposed defects, she was rated down last spring to A1½ against the protest of her owner. The surveyors state that they have tested the softest part of her hull a d find four inches of solid oak. She is bruised here and there, as all Lake Superior traders, but she is nowise detective. It is likely that she will now be restored to her old A1 rate. Mr. J. C. Gilchrist, her owner, was present at the new survey.

The repairs to the schooner Reed Case at Mills's drydock will cost about $600. She appears to have been the victim of bad work in repairing a former accident. She was ashore in Canadian waters last year, and in fixing her up a broken plank was left and the break filled with tallow. When this worked out she leaked, of course. A garboard strake had only been fastened by one spike, and in calking her this was crowded off making another leak.

The Tioga has completed ten round trips between this port and Chicago, this being done in eighty-five days. This is the best work on record, and a couple of years ago would have been considered almost a season's work. With ordinary luck she will make twenty-five trips this season.

The Union Steamboat Company received $1,000 for the aid rendered the Bessemer by the Blanchard on Lake Superior last fall. The former was held by the latter while a broken steering gear was repaired.

The loss of the schooner Theodore Perry has caused a diversion in marine insurance circles. She rated B1, yet her cargo was insured. There has always been objection to taking such risks and some careful agents are entirely against it. In view of the fact that the Perry went to pieces so easily, just opened out, as the phrase is, it appears that some boats creep into this class when they do not belong there. From this, follows insurance losses that are not counted on and upset calculations. Now comes a case in point. The propeller Maine and tow were this week put on the market for coal cargoes and nominally chartered to Hancock and Houghton at $1.05. But it was then found that the barges William Young and John Sherman of the tow classed B½, even below the Perry's class, whereupon the underwriters refused to insure their cargoes. The charter is off unless the matters can be patched up. There has been considerable talk since the Perry disaster, as there always is when an old vessel goes down, about the foolhardiness of taking such risks. The Perry was repaired last year in order to get her rating and it is now argued that even this can be done and yet not render an old vessel seaworthy. It is reported that the underwriters are hereafter going to insist on new requirements, such as the use of iron stays, before such vessels are to be given any rating.

EAST SAGINAW.

Special to the Marine Record.

The tug Robt. Weideman, narrowly escaped total destruction by fire Wednesday a. m., at 2:30 o'clock, while lying at foot of Genesee ave. The crew were awakened by the heat and smoke, just in time to make their escape, and with the assistance of the tug C. B. Hull, which happened to be near at hand with steam pump succeeded in subduing the flames. The fire started around the boiler and did $200 damages. Captain John DeVaney, who was asleep in the pilot house when the fire started, got out not a moment too soon.

Captain John O'Flinn, has taken his recent purchase, the steamer Emerald, to Duluth, where she will engage in log towing. Captain O'Flinn, was for years a familiar figure on Saginaw river. He left here five years ago with more pluck than wealth, and is reported to have struck it rich, at the head of Lake Superior, between sailing and mining, particularly the latter. SHAW.

MILWAUKEE.

Captain Goldsmith, of steamship Progress, is lying at the point of death at the Oakland house, St. Clair, Mich., suffering from a stroke of apoplexy. A dispatch received by the Chapin Mining Co. stated that he was in an unconscious condition, and the physicians looked for no change for three days. Captain Goldsmith is one of the oldest and best known masters on the lakes, having been sailing for nearly fifty years. For a long time he was in Ward's passenger line, between Chicago and Buffalo, and has sailed the Progress since she came out in 1881. His home is at Goochland, Va.

Oscar Heyne, mate on the barge Manitowoc, fell into the vessel's hold, a distance of twenty feet, as she was leaving for Escanaba on Tuesday morning, and was frightfully mangled, dying shortly afterward. The body was shipped to Oswego.

WEST BAY CITY.

The following vessels have been built at F. W. Wheeler's shipyard since he acquired it in 1876: Mary Martini, propeller, lost in 1886. Luther Westover, tug, owned by Captain Boutelle, Bay City. Christie Forbes, propeller, running on west shore of bay. Hannah B., propeller, burned. Marian Teller, tug, on Saginaw river. Charles W. Liken, tug, owned by the Au Gres Boom Company. Lycoming, propeller, owned by the Anchor Line. Conemaugh, propeller, owned by the Anchor line. Charles Cuyler, tug, Cheboygan. Maud S., tug, Saginaw river. Saginaw Valley, propeller, between Buffalo and Green Bay, Wisconsin. Fred McBrier, propeller, Alpena. Galatea, schooner, Erie, Pa. Handy Boy, yacht, Saginaw river. Oscoda, propeller, Ward's Lake Superior line. Kittie M. Forbes, steambarge, Port Huron. Sarah Smith, tug, Saginaw river. F. W. Wheeler, schooner, lost in Lake Superior, 1885. Alta, schooner, Detroit. A. Folsom, steambarge, Bay City. B. W. Arnold, steambarge Mills Transportation Company. H. A. Hawgood, four-masted schooner, Hawgood & Avery, Bay City. Ossifrage, propeller, Cheboygan and Sault ste. Marie route. W. H. Stevens, propeller Ward's line. Stafford, steambarge Detroit. W. H. Gratwick, steambarge, Detroit F. W. Wheeler, steambarge, Detroit. Mable Wilson, four-masted schooner, Port Huron. The total value of the boats above enumerated is over $1,500,000.

On the stocks Mr. Wheeler has in process of construction four propellers—one for Captain Thomas Wilson, one for the Mills Transportation Company, one for David Whitney, of Detroit, and one to be owned jointly by Mr. Gordon, of Bay City, and Mr. Wheeler. The value of these crafts will be about $450,000.

MANITOWOC.

The new passenger and freight propeller A. D. Hayward, sailed on her maiden trip for Chicago last week. The new vessel is 147 feet over all, 29 feet beam, and 11 feet hold. She is propelled by a 24 by 26 inch engine, and has a steel boiler measuring 8½ by 14. She registers 250 tons. There are twelve staterooms, six feet square, with one single and one double berth each. Her staterooms and cabins are carpeted with Brussels and her furnishings are in red plush. Her cabin is commodious 56 feet long and 9 feet high. She will run between Chicago, Whitehall and Montague. Her frames are stoutly constructed of 5 inch plank, double; floor timbers, 13 inches; outside planking 3½ inches; inside, 3 inch. She has five bilge strakes three of 6 inch and two of 5 inch plank. Her stringers, inside and outside are locked into the stanchions The vessel is officered as follows: P. D. Campbell, captain; Smith Saunders, first mate; Emory Christian, engineer; and Isaac Berd, steward. There are three water tight compartments, each supplied with adequate machinery. She was built at Manitowoc by Burger Bros., and launched last month. On her maiden trip the Hayward made eleven miles per hour. Her owners say that the new vessel surpasses their most sanguine expectations.

The schooner Joseph Paige, which was run into at the Sault, was towed here and put in drydock. Her damages are estimated at about $1,200. She will receive a new bowsprit and stem.

SANDUSKY.

A sailor named James Lucy, employed on the schooner Belle Hanscomb, now lying at this port, was knocked down and severally injured by Captain Thomas McLeod, of that craft, for an act of insubordination. Lucy had McLeod arrested on the charge of assault with intent to kill. When the case came up for hearing it could not be proven that the captain assaulted the man with murderous intent, and McLeod thereupon entered a plea of guilty of assault and battery and paid a fine and costs amounting to $18.95.

CHEBOYGAN.

Chief engineer Booth, of the steamer Isaac May, fell dead while attending to his duties about his engine Saturday morning. Supposed to be heart disease. The remains will be sent to Black Rock, his late home. He was about 70 years old, and formerly sailed in the propeller Clyde in the same capacity. He is well and favorably known on the lakes

VESSEL OWNERS AND AGENTS.

H. J. WEBB & CO.,

Ship Brokers, Vessel Owners and Agents.

[ESTABLISHED IN 1856.]

H J. WEBB & Co., will charter Vessels for Lake Trade Special attention given to Chartering Vessels in the Lake Superior Iron Ore Trade, both for the season and single trip.

ARCADE BUILDING, 101 ST. CLAIR ST.,

Room 27. Cleveland, Ohio.

TELEPHONE { Office, No. 338. Residence, No. 1328.

WARNER & BECKER,

Vessel Agents and Brokers,

ROOM 10,

Arcade B'ld., 101 St. Clair St,

CLEVELAND, OHIO.

J. J. H. BROWN. EDWARD SMITH

BROWN & CO.,

Ship Brokers and Agents.

Special Attention given to Surveying, Appraising and Settling Marine Losses.

Exchange Building, 202 Main-st., Buffalo, N. Y.

ALEX McDOUGALL,

VESSEL AGENT AND BROKER,

Duluth.

Owners and masters of vessels wishing to get cargoes of grain from this port will do well to confer with me. Will be glad to furnish information in regard to cargoes, also in relation to docks, depth of water, etc., at **Duluth, Agate Bay** (new iron ore port), **Port Arthur, Washburn, Ashland,** and all points near the west end of Lake Superior. Good gangs of men furnished on short notice for trimming cargoes of grain, loading and unloading all kinds of freight.

PALMER & BENHAM,

Vessel Owners & Agents,

New Bank Building, corner of Superior and Bank Street. Cleveland, Ohio.

MOORE, BARTOW AND GILCHRIST,

Ship Brokers and Agents,

No. 101 St. Clair Street, Room 15.
CLEVELAND. - OHIO.

JAMES T. ROSE,

Vessel Agent and Broker,

Room 4, Exchange Building, Duluth, Minn.
I have an excellent gang of Trimmers this season, Captain Miller's old Crew.
Special Attention Paid to Chartering Vessels, and seeing that they get dispatch in Port.
CORRESPONDENCE SOLICITED.

THOS. WILSON

MANAGING OWNER

Wilson's Transit Line.

Gen. Forwarder. Freight and Vessel Agent.
CLEVELAND, O.

JOHN P. DEVNEY,

Marine Collector.

Collections Promptly Attended to.

ASHTABULA HARBOR. OHIO.

PROCTORS IN ADMIRALTY.

Removal!

William H. Condon,

MARINE LAWYER,

240 La Salle cor. Jackson st.

CHICAGO, ILL.

ROBERT RAE,

Admiralty and Insurance Law Office,

Room 37 Merchants' Building, CHICAGO, ILL.

WM. H. DeWITT,

Attorney and Proctor in Admiralty.

ROOM No. 6, BLACKSTONE BLOCK.

CLEVELAND, OHIO.

GEORGE E. HALLADAY.

Attorney and Proctor in Admiralty.

Marine Business Promptly Attended To.

OFFICE 21 BUHL BLOCK, DETROIT, MICHIGAN.

CAPT. ALEX. McHARLAND.

Iron Ore Trimmer and Contractor,

ASHLAND, WIS.,

Has a large gang of men, and is in a position to give prompt attention to all orders intrusted to him.

SATISFACTION GUARANTEED IN EVERY RESPECT

C. A. KING,

General Stevedoring. Discharging Loading and Ore Trimming Promptly Attended to. A Large Force of Men always on Hand. Information in regard to

DEPTH OF WATER OF ALL DOCKS IN

ASHLAND HARBOR

gladly furnished. Quick dispatch guaranteed. Patronage Solicited.

C. A. KING, Ashland Wis.

Grummond's Mackinac Line

Stmr. Flora, W. E. Comer, Master, Leaves TOLEDO every Tuesday at 9 a. m., City time,

Stmr. Atlantic, J. R. Jones, Master. Leaves CLEVELA'D every Friday at 9 p. m., City time,

For Mackinac, St. Ignace, Cheboygan, Alpena, Oscoda and way ports. For Freight or Passage apply to ANDERSON & BATES, Agents, Dock Foot of Superior street, Cleveland, O.
S. B. GRUMMOND, Owner, Detroit, Mich.

A. J. MORSE & SON.

DIVING APPARATUS

140 CONGRESS ST. BOSTON.

HULL'S

RUBBER STORE.

SPECIAL GRADES OF

WATER AND STEAM HOSE

FOR MARINE USE.

Steam Packing, Gaskets. Valves, etc., etc.

Rubber clothing, boots & shoes.

E. W. HULL,

237 Superior-st, CLEVELAND, O

Send for Price List.

ALPENA

Marine Store.

Constantly on hand FRESH GROCERIES, PROVISIONS, FRUIT, VEGETABLES, BUTTER, EGGS, TOBACCO & CIGARS.

Prompt Delivery Guaranteed.

MUELLERWEISS & CO.,

Comstock Block, 2d St.

CANVAS OIL BAGS for use on board Vessel and Steamer to lessen the dangerous effects of heavy seas. Write for pamphlet.

M. H Dodge & Co., 24 Broadway, Cleveland, O

GEORGE SAAL'S SON.

Copper-smithing of all Kinds.

VESSEL WORK A SPECIALTY.

403 and 405 Detroit-st., corner Duane-st.. Telephone 1638. CLEVELAND, O.

MARTIN MULLEN, Agent,

DEALER IN

Youghiogheny & Massillon Coal

DOCKS AT GOVERNMENT PIER AND RIVER BED SLIP.

Office. 81 Perkins Building, East Side of Main Street Bridge, CLEVELAND, OHIO.

Telephone No. 2701.

BOATS COALED DAY OR NIGHT.

Marine Glasses AND **Barometers !**

Spring import just received at

L. H. SOLOMONSON'S, Optician,

252 SUPERIOR-ST., CLEVELAND, O.

DAVID BARNHISEL, Agent.

DOMESTIC & STEAM COAL

Cleveland, Ohio

S. B. GRUMMOND,

OWNER OF FIRST-CLASS

Tugs for Wrecking, Raft Towing, Etc.

ALSO, 16 STEAM PUMPS, ROTARY AND WORTHINGTON,

Improved Horizontal Straight Base Hydraulic Jacks.

Sub-marine Divers, Hawsers, Lighters, Etc.

WAREHOUSE AND OFFICE ON DOCK, BET. FIRST AND CASS STS,

OWNER OF TUGS 'Winslow,' "Leviathan,' 'M. Swain,' 'Champion,' 'Wm. A. Moore,' and 'Oswego. } **Detroit, Mich.**

☞ OFFICE OPEN DAY AND NIGHT. SATISFACTION GUARANTEED. ☜

BRANCH OFFICES at PORT HURON & CHEBOYGAN, MICH

WRECKING TUG

LEVIATHAN, CAPT. M. SWAIN, STATIONED AT CHEBOYGAN

HOWARD H. BAKER & CO.,

Ship Chandlers & Sail Makers.

WHOLESALE AND RETAIL DEALERS IN

Cordage, Wire Rope Blocks, Canvas, Anchors, Chains, Paints, Oils, Naval Stores, etc.

Cylinder, Lard, Signal and Lubricating Oils a Specialty.

AGENTS FOR THE

American Ship Windlass Company for Lakes Erie and Ontario.

IMPORTERS OF NAUTICAL INSTRUMENTS OF EVERY DESCRIPTION.

We carry a larger assortment of goods in our line than any other house in the trade and can not be undersold.

Call at Our Mammoth Store and See for Yourselves.---18, 20, 22, 24 & 26 Terrace,

BUFFALO, NEW YORK.

The J. P. Donaldson Co.,

Ship Chandlers,

SAIL MAKERS AND RIGGERS.

Manufacturers of OARS and OAR LOCKS, Dealers in

Cotton Duck, Wire Rope,

Cordage, Etc.

22 and 24 Woodward Ave.,

DETROIT, MICH.

D. S. AUSTIN EMMET AUSTIN.

D.S. AUSTIN & CO.

Ship Chandlers & Sail Makers.

WHOLESALE AND RETAIL DEALERS IN

Cotton Duck, Cordage, Wire Rope, Oakum, Pitch, Tar, Paints, Oils, etc.

Complete Outfits of Sails, Rigging, etc., for Vessels and Steamers, furnished on short notice and at as low prices as any one on the Lakes.

Ft. of Washington St., BUFFALO, N. Y.

GEO. C. FINNEY. JAS. CHANNON

Finney AND Channon,

Ship Chandlers & Sail Makers,

Manila, Hemp and Wire Rigging

Blocks, Anchors, Chains, Paints, Oils, etc.

Special Attention Given to Out-fits and Repairs.

270 and 272 South Water St.,

CHICAGO, - - ILLINOIS.

J. W. GROVER & SON,

SHIP CHANDLERS

SAIL MAKERS AND RIGGERS,

IMPORTERS AND WHOLESALE DEALERS IN

Wire Rope, Manila and Tarred Cordage, Canvas, Blocks, Oakum, Tar, Pitch, Oars, Anchors, Chains, etc.

117 & 119 RIVER ST., & 134 & 135 DOCK, CLEVELAND, OHIO.

H. L. SHAW,

EAST SAGINAW, - - - MICH.,

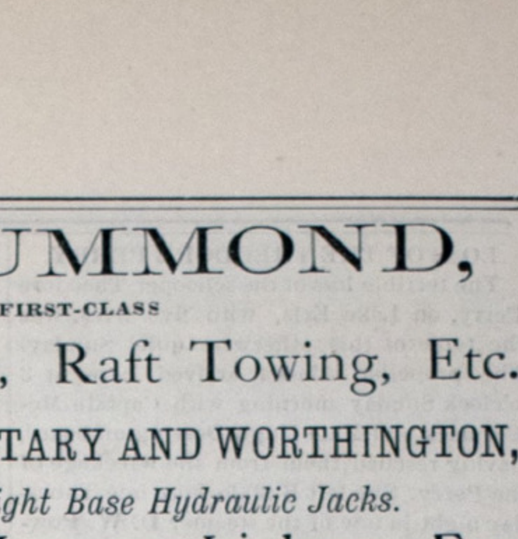
VESSEL BROKER, AGENT AND OWNER

Special attention given to charters for the LUMBER COAL AND STONE TRADE.

Vessel property and machinery bought, sold and exchanged. If you have anything to sell or want to buy write me; no commission unless sale is made.

MARINE COLLECTIONS PROMPTLY ATTENDED TO.

Tugs and Lightersalways on hand. Correspondence solicted.



Cleveland Block Co.,

MANUFACTURERS OF

Iron Tackle Blocks

TAKING THE PLACE OF WOODEN BLOCKS FOR ALL PURPOSES.

159 River St., CLEVELAND, O.

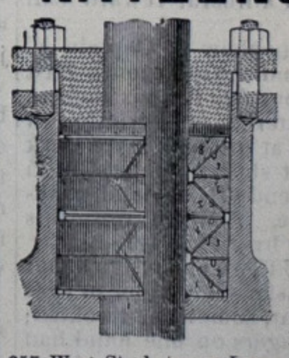
ROPE NETTING

For Steamers and Steam Yachts a Specialty.

E. A. EVANS, Rigger,

193 South St., New York.

KATZENSTEIN'S



SELF-ACTING METAL PACKING

FOR PISTON RODS, VALVE STEMS, Etc.

Adopted and in use by the principal Iron Works and Steamship Companies within the last eight years in this and Foreign countries. Also flexible tubular metallic packing for slip-joints on steam pipes and for hydraulic pressure. For full particulars and references address

L KATZENSTEIN & CO

357 West St., between Leroy and Clarkson-st, N. Y.

CAPT. THOS. WILSON, who uses this packing on his Steamers, and THE MARINE RECORD are Agents for Cleveland and the Lakes.

A. H. MILLS'

Harbor and River Tug Line

Detroit, Mich.

Office No. 8, Foot of Woodward Ave., on the Dock.

Telephone No. 508.

Tugs Shoo Fly, Dave and Mose.

Steam Pumps and Divers on Short Notice.

DETROIT & CLEVELAND

STEAM NAVIGATION CO.,

BETWEEN

CLEVELAND & DETROIT,

MACKINAC ISLAND, ST. IGNACE,

ALPENA, SAND BEACH,

PORT HURON, ST. CLAIR,

OAKLAND HOUSE, MARINE CITY

Special Sunday Trips

BETWEEN CLEVELAND AND DETROIT

DURING SUMMER MONTHS.

For full information, rates, tickets, etc., apply to E. B. WHITCOMB, Gen. Pasgr. Agt., Detroit, Mich, T. F. NEWMAN, General Agt, Cleveland, O.

Travelers Information Bureau,

224 Bank St., CLEVELAND O.

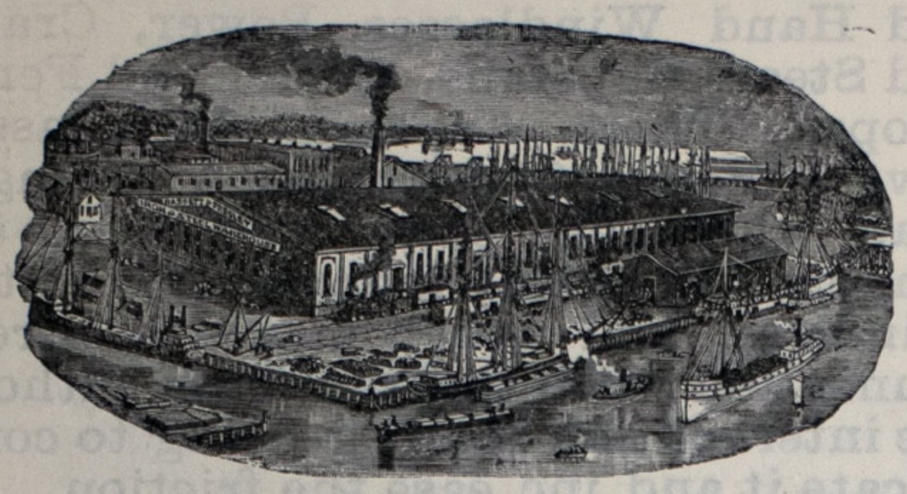
Where may also be found a full line of ocean ticke

IRA B. BASSETT. GEORGE PRESLEY, Jr.

BASSETT & PRESLEY,

[Successors to W. H. McCurdy & Co.]

Office and Warehouse, cor. Elm & Hemlock Streets, Cleveland, O.



WHOLESALE DEALERS IN

BAR, BOILER, HOOP, ANGLE AND SHEET IRON.

Nails, Railroad and Boat Spikes, Boiler, Tank and Cooper Rivets, Swedes Iron, Boiler Tubes, Nail Rods, Etc., Etc., Etc.

We Represent in this Market the Following Well-known Manufacturers:

Andrews Bros. & Co. .....Youngstown, O.
BAR IRON AND POLISHED SHAFTING.

Reading Iron Works.....Philadelphia, Pa.
BOILER TUBES.

Central Iron Works.....Harrisburg, Pa.
BOILER PLATES.

Lindsay & McCutcheon,.....Pittsburg, Pa,
HOOP, BAND & STAR HORSESHOE IRON.

George W. Johnson,.....Newcastle, Pa.
TANK SHEET IRON.

Dilworth, Porter & Co., Limited..Pittsburg, Pa.
RAILROAD AND BOAT SPIKE.

Hoopes & Townsend,.....Philadelphia, Pa.
BOILER AND TANK RIVETS.

Sanderson Bros. Steel Co,.....Syracuse, N. Y.
CAST STEEL.

Joseph Corns & Sons ....Massillon, O.
CROWN STAY BOLT IRON.

Pencoyd Iron Works,.....Philadelphia, Pa.
ANGLE IRON.

A Complete Stock of all above Goods in Our Warehouse.

SAMUEL F. HODGE & CO.,

MANUFACTURERS OF

MARINE,

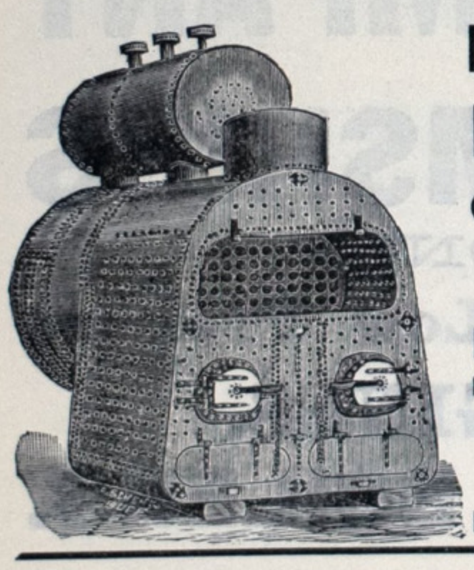
Stationary & Portable Engines,

MINING MACHINERY AND

PROPELLER WHEELS,

Riverside Iron Works, 314 to 326 Atwater Street,

DETROIT, MICH.



EAGLE BOILER WORKS,

M. RITER, Prop'r,

Cor. Indiana & Mary St.,

BUFFALO, N. Y.

MANUFACTURER OF

High and Low Pressure

Marine, Stationary, Portable, Locomotive and Upright Boilers; also, Salt Pans, Smoke Pipes and Heavy and Light Plate Iron Work of all Descriptions.

REPAIRS PROMPTLY ATTENDED TO.

O. & P. COAL CO. & THOS. AXWORTHY.

FUEL DEPARTMENT.

PRESLEY, ARTHUR & CO., AG'TS.

Steamboats, Tugs, etc, Coaled Day and Night.

DEALERS IN LACKAWANNA ANTHRACITE COAL.

Docks: Ft. West River St., Whisky Island, C. P. R'y. Slip, Government Pier

OFFICE 130 RIVER-ST., CLEVELAND, OHIO.

BAGNALL & LOUD BLOCK CO.,

BOSTON, MASS.

The Largest and Most Reliable Manufacturers in the United States of

TACKLE BLOCKS.

Their Specialties are: Self-Lubricating Metaline Blocks: Self-locking Link Snatch Blocks: Self-adjustable Five Roll Roller Bush Blocks; Loud's Patent Non-chokable Diaphragm Pumps will pump Sand, Gravel, etc., without injury to the Pump, having no plunger. Easiest Working Pump in the Market

OUTFITS FOR VESSELS A SPECIALTY.

We make the most durable grade of Blocks to be obtained in the market. Call for our SELF-ADJUSTABLE FIVE ROLL ROLLER BUSHED STAR BRAND BLOCKS AND DO AWAY WITH REPAIRS.

ST. MARY'S, OHIO. MONTPELIER, OHIO. } OAR MILLS. NEPTUNE ANCHOR WORKS

DEGRAUW, AYMAR & CO.,

MANUFACTURERS AND IMPORTERS OF

CORDAGE, OAKUM, WIRE ROPE,

CHAINS. ANCHORS, OARS. BLOCKS,

COTTON AND FLAX DUCKS, FLAGS

BUNTINGS, RUSSIA BOLT ROPE,

MARINE HARDWARE AND SHIP-CHANDLERS' GOODS GENERALLY.

NOS. 34 AND 35 SOUTH STREET, NEW YORK.

A PUZZLE.

Which Man is the Tallest?

If you measure carefully the figures in above Cut you will find the man who appears the shortest is in reality the tallest. If you will coal your boat at my dock, adjoining S. F. Hodge Iron Works, you will get better dispatch and better COAL than at any other place in the city.

O. W. SHIPMAN,

OFFICE:

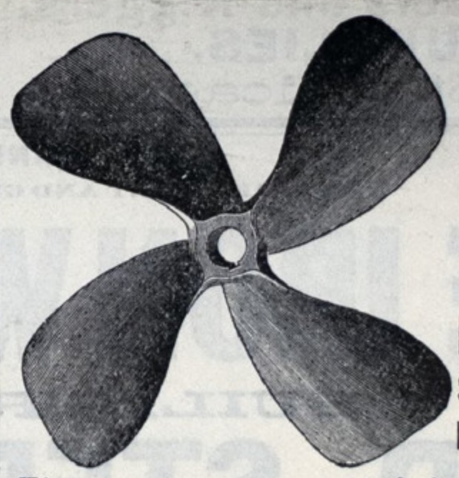
Cor. Griswold and Larned Sts.

H. G. TROUT,

KING IRON WORKS,

BUFFALO, N. Y.,

MANUFACTURER OF



Triple Expansion Marine Egines,

Three Cylinder and Fore and Aft and Steeple Compound Marine Engines,

High and Low Pressure Engines,

SECTIONAL PROPELLER WHEELS,

PROPELLER, TUG & YACHT WHEELS

These wheels are noted for their extra speed and towing power, or aproportionate saving of coal.

PRICES QUOTED ON APPLICATION.

W. H. H. PECK & CO.,

RUBBER WAREHOUSE,

176 Superior Street, Cleveland, O.

See that your hose and packing is of the New York Belting and Packing Co.'s make.

VALVES, Flax & Goodsell's and Henderson's Patent Packings.

RUBBER BOOTS, CLOTHING AND OIL CLOTHING.

SUB-MARINE ARMOR.

FOR SALE,

A POWERFUL RIVER AND HARBOR TUG.

Length 95 feet, breadth 17 feet, depth 9 feet, draws 9 feet. New tonnage 40, old 81. Engine 22x24. She is allowed 90 pounds of steam. Has new main valve, new throttle valve, new eccentrics, two new tow posts, four new timber heads, one new metallic life boat and new wheel, ironed all around for work in ice. Cabin, pilot house and engine room remodeled. Can carry sixty (60) tons fuel, has forty life preservers, water-tight bulkheads, and is allowed to carry passengers. She rates A2, valued in Lloyd's at $10,000, and is warranted in first-class shape. Address MARINE RECORD OFFICE.

STEAMBARGE FOR SALE.

This is one of the finest steambarges on the lakes, and was built in 1884. She is in good condition in every respect, serviceable, easy to load and unload, and a great favorite. She can not be duplicated for the same money. Her dimensions are 131 feet keel, 143 feet over all, 23.4 feet beam, 8.4 feet depth of hold, and is classed A1½ by Inland Lloyds. She carries two masts. Her carrying capacity is 400 to 425 tons or 14,000 bushels of wheat, or about 240,000 feet of lumber on a dratt of 9 feet 9 inches. Her engine is high pressure 18x20 and her boiler 6½x12 feet of 7-16 Otis steel. Speed 10 miles loaded or 11½ light.

Address MARINE RECORD, Cleveland, Ohio.

JUST PUBLISHED. *NOW READY*

LEWIS' MARINE MANUAL,

A SUMMARY OF THE LAW

RELATING TO OR IN ANY WAY CONNECTED WITH THE

Shipping Mercantile and Marine Interests of the Lakes

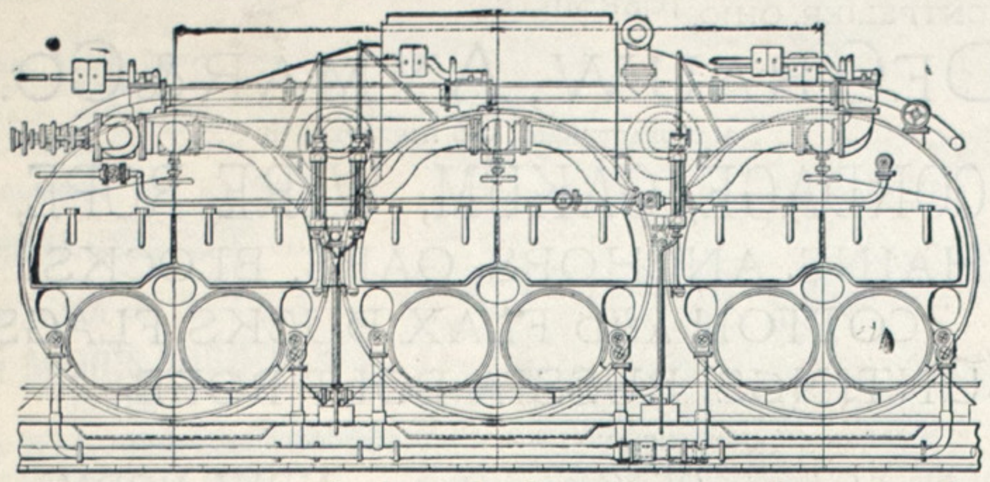
And the Sea-coast Waters of Canada and the United States,

By EDWARD N. LEWIS, Proctor in Maritime Courts.

OVER 500 PAGES - - - PRICE $2.50

Address MARINE RECORD OFFICE, Cleveland, O.

LAKE ERIE BOILER WORKS.



The best equipped plant in America for the manufacture of Modern Marine Boilers

BUFFALO, NEW YORK

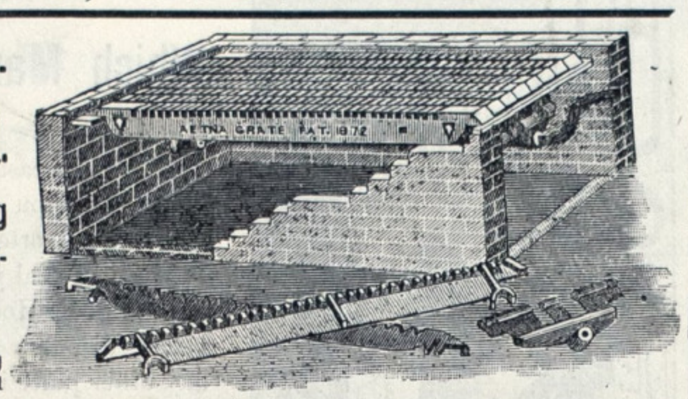
THE ÆTNA GRATE.

G. C. BARNES, Agt.

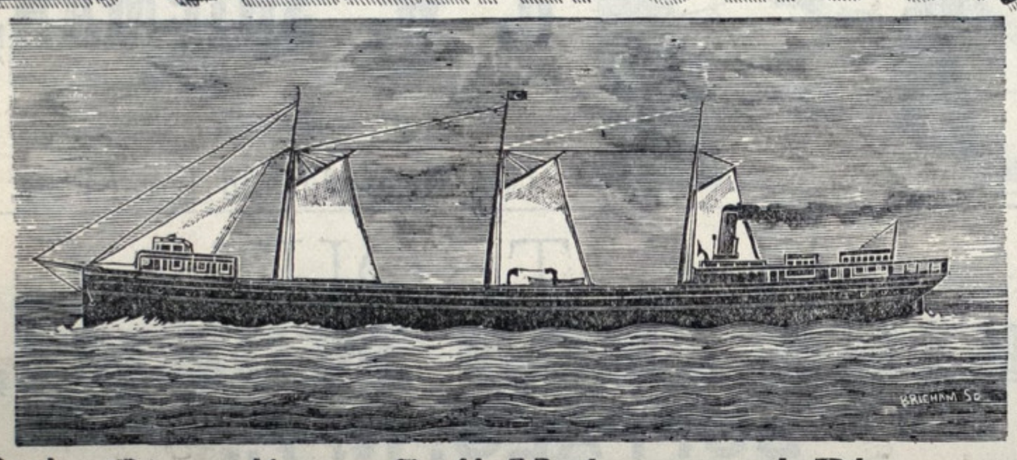
This Improved Shaking Grate Especially Adapted to Burning Slack.

Globe Iron Works, Manufac's.,

Office and Foundry, corner of Elm and Spruce-sts., CLEVELAND, O.



H. CHANNON CO.,



Ship Chandlers, Sail Makers and Riggers.

STEAM-BOAT SUPPLIES.

22 to 26 Market-St., near Randolph-St., Chicago, Ill's.

Established in 1857.

AMERICAN SHIP WINDLASS CO.,

Builders of Steam, Messenger Chain and Hand Windlasses, Power, Crank and Steam Capstans, Wharf and Ferry Drops. Their Capstan Windlasses have a Power Capstan with a single head which has power and speed arrangement entirely independent of the Windlass, and which makes a direct connection with the Windlass without the intervention of any gearing to complicate it and increase the friction.

In all their styles of Steam Windlasses they make a direct connection between the engines and the windlass without counter shafts or additional gearing. This saves friction and liability to break down, and conduces to durability and ease in operating. They also have a counterbalance for the engines and an automatic lubricator for worm and worm gear, and the engines are placed together in the most accessible position. The above improvements and others too numerous to mention, but which are familiar to Masters, Owners and Builders, are covered by Patents owned exclusively by this Company. For plans and information

Address,

FRANK S. MANTON, Agent. P. O. box 53, Providence, R. I.

H. M. HANNA, PRESIDENT. JOHN F. PANKHURST, VICE PRESIDENT AND GENERAL MANAGER. LUTHER ALLEN, SECRETARY AND TREASURER

THE GLOBE IRON WORKS COMPANY

BUILDERS OF

IRON AND STEEL STEAMSHIPS

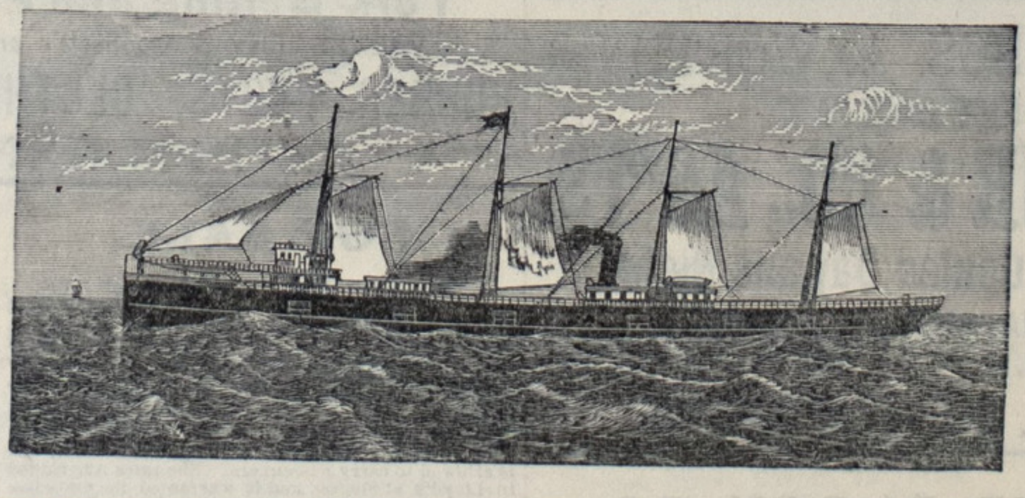
AND VESSELS OF ALL DIMENSIONS,

Triple Expansion, Compound, High Pressure and Low Pressure

MARINE AND STATIONARY ENGINES,

MARINE, STATIONARY & PORTABLE BOILERS.

Blast Furnace and Rolling Mill Machinery, Hoisting and Pumping Engines, Portable Hoisting Engines.



Steam Pumps, Steam and Hand Windlasses, Winches, and Marine Appliances of Every Description.

GENERAL SHEET AND PLATE IRON WORKERS,

Machinists, Boiler-Makers and Founders.

Builders of

Iron Steamships "Onoko," "Wm. Chisholm," "J. H. Devereux," Etc.
Steel Steamship "Spokane."
Passenger Steamer "Darius Cole."
Steam Yacht "Twilight."
Iron Tugs "International" and "Record."

OFFICE & WORKS, Spruce and Elm Streets.

IRON SHIP YARD, Old River Bed, foot of St. Paul St

CLEVELAND, OHIO.